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ABSTRACT

The purpose of this study was to examine the associations among adolescent personality traits, Confucian values, parenting styles (and psychological control), and aggressive behaviors in South Korean families. Although the use of aggression by Korean adolescents has increased in contemporary Korean society, there is a lack of research on how adolescent personality traits and cultural values impact adolescent behavioral outcomes through parenting styles and psychological control. The sample included 361 parents (mothers and fathers) and their adolescents (7th and 8th grade) and the teachers of participating adolescents. Results indicated that adolescents' agreeableness, extraversion, and neuroticism were associated with adolescent overt, relational, and cyber aggression. Adolescents' Confucian values were associated with their relational and cyber aggression. Mothers' Confucian values were associated with their adolescents' overt aggression, and fathers' Confucian values were related to their adolescents' cyber aggression. Mothers' and fathers' authoritarianism did play an important role as a mediator in the relationship between adolescents' personality traits and their aggression. Adolescents' personality traits were associated with their overt aggression via a mediating role of fathers' and mothers' psychological control. Findings revealed that parenting styles and psychological control did not mediate the relationship between adolescent and parental Confucian values and adolescents' aggressive behavioral problems.

ADOLESCENT PERSONALITY, CONFUCIAN VALUES, PARENTING TYPOLOGIES
AND ADOLESCENT BEHAVIORAL OUTCOMES: A STUDY IN SOUTH KOREA

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DISSERTATION

Submitted in partial fulfillment of the requirements for the
degree of Doctor of Philosophy in Child and Family Studies in the Graduate School of
Syracuse University

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CHAPTER I

Introduction

Over the past several decades, there has been a steady rise in the number of studies that have investigated adolescent aggression (Barber, 1996; Crick, Grotpeter, & Bigbee, 2002; Prinstein, Boergers, & Vernberg, 2001; Weiss, Dodge, Bates, & Pettit, 1992). Aggression is one of the most disruptive and prevalent forms of maladjustment in adolescence (Dishion & Patterson, 2006) and has been linked to poor academic achievement (Wright & Fitzpatrick, 2006), physical injuries, low levels of self-esteem (Donnellan, Kali, Trzesniewski, Robins, Moffitt, & Caspi, 2005), loneliness, depression, social anxiety (Pepler & Craig, 2005), peer rejection, withdrawal (Crick & Grotpeter, 1996) and externalizing problem behaviors (Phelps, 2001). Adolescent aggressive behaviors have also been linked to long-term behavioral and social difficulties (Coie & Dodge, 1998; Crick, 1996; Moffitt, Caspi, Harrington, & Milne, 2002), as well as antisocial and delinquent behaviors in adulthood (Petras, Schaeffer, Ialongo, Hubbard, Muthen, & Lamert, 2004).

Hostile behaviors by aggressors are perceived by their victims as intentional and harmful (Paquette & Underwood, 1999). Two aspects of aggressive behaviors (overt and relational aggressive behaviors) have been the focus of extensive study in the research literature. Overt aggression includes behaviors that harm others through physical damage or the threat of such damage (e.g., pushing, hitting, and threatening to hit others) (Crick, 1997). On the other hand, relational aggression indicates behaviors that harm others through purposeful damage or disruption of their peer relationships, and friendships, and spreading

rumors about others (Crick & Grotpeter, 1995). Studies have indicated that children view relationally aggressive behaviors as hostile (aversive and mean) and this form of aggression is relatively more frequent in girls' interactions. On the other hand, overt aggressive behaviors are the more common among boys (Crick, Bigbee, & Howes, 1996; Crick & Grotpeter, 1995; French, Jansen, & Pidada, 2002).

Recent studies have indicated that aggressive behaviors are on the increase among adolescents in South Korea (Kim, 2001; Kim & Chung, 2007). According to a study by the Ministry of Health, Welfare and Family Affairs (2012) titled the "Comprehensive Survey of influence on adolescents from negative social environment in Korea," 27.9% of adolescents between 12 to 18 years reported engaging in aggressive and antisocial behavior problems. Among them, 10.8% of adolescents reported engaging in verbal abuse/threat, 6.8% of adolescents reported having been in a physical fight, 4.6% of adolescents reported stealing money or property, and 3.8% of adolescents reported bullying and ostracizing other students. In a study by Kim and Chung (2007) of 482 6th to 9th graders, 25.2% of adolescents used verbal or physical aggression toward their parents and 63.7% of adolescents indicated that they had engaged in aggressive behaviors in school in previous year. Another study by Kim (2001) found that adolescents reported high levels of relational and physical aggression among Korean middle school students.

Although national surveys and smaller research studies on adolescent aggression in South Korea have indicated important findings, studies have primarily focused on the characteristics of victims of violence or perpetrators of bullying in schools (e.g., Kim &

Park, 1997). Limited attention has been given to the role of individual, cultural, and family level factors and their interrelationships in the development of aggression among Korean adolescents.

For the purpose of this investigation, three contextual factors are central in explaining aggressive behaviors among adolescents. They include: adolescent personality characteristics, parents parenting styles, and cultural values.

One's personality characteristics determine how one frames one's experiences and responds to a variety of behavioral tasks, including social relationships (Asendorpf, 1998), job performance (Mount, Barrick, & Stewart, 1998), psychopathology (Watson & Clark, 1994), and health behaviors (Booth-Kewley & Vickers, 1994). Studies on personality traits have been challenged by limitations in both the conceptualization and measurement of personality (Belsky & Barends, 2002). Research studies have not included the broad array of personality dimensions (e.g., Belsky, Crnic, & Woodworth, 1995; Kendler, Sham, & MacLean, 1997; Olsen, Martin, & Halverson, 1999) and this has limited our understanding of the role of specific dimensions of personality and their specific links to adolescent aggressive behaviors. In fact, several researchers have suggested that a new direction be chartered in studies understanding the role of individual personality traits (Caspi & Shiner, 2006; Gleason, Jensen-Campbell, & Richardson, 2004; John & Srivastava, 1999). Today, the most comprehensive and widely used framework for understanding personality is termed the "Big Five" or the five-factor model (DeYoung, Quilty, & Peterson, 2007; John & Srivastava, 1999; McCrae & Costa, 1999). The Big Five factor model includes the

following subscales: Agreeableness, conscientiousness, extraversion, neuroticism (emotional stability), and openness to experience (Caspi & Shiner, 2006; Goldberg, 1990). Studies have indicated that low agreeableness, low conscientiousness, and high neuroticism are associated with aggression (Barlett & Anderson, 2012; Gleason et al., 2004; Graziano, Jensen-Campbell, & Hair, 1996; John, Caspi, Robins, Moffitt, & Stouthamer-Loeber, 1994; Miller & Lynam, 2001; Miller, Lynam, & Leukefeld, 2003; Suls, Martin, & David, 1998). Ehrler and others (1999) found that personality factors such as agreeableness, conscientiousness, and openness to experience are associated with aggressive behaviors (threaten others and picking fights) among nine to thirteen-year old children (Ehrler, Evans, & McGhee, 1999). Miller and others (2003) also found that dimensions of agreeableness and conscientiousness were significantly associated with adolescents' aggression and antisocial behaviors whereas neuroticism was not associated with aggressive outcomes.

Second, there is a growing recognition that culture plays an important role in shaping individual behaviors (French et al., 2002; Ramirez, Andreu, & Fujihara, 2001). Cultural psychologists have argued that research on children and families should be culturally contextualized (Super & Harkness, 2002). In Korea, Confucianism, the dominant ideology for more than 500 years, has influenced all aspects of family life, values, rules, and norms. Confucianism considers individuals as interdependent entities, and the family is considered to be the fundamental unit of all relationships (Lee, 1990; Yi, 1993). For example, Korean culture emphasizes family unity and group awareness, which calls for sensitivity to others and minimization of conflict with adults or peers, over individual concerns (Farver, Kim,

Lee-Shin, 2000). These cultural ideals reflect the heavy influence of Confucian values, whose characteristics include respect for authority, familial collectivism, and a sustained lifestyle of discipline and self-cultivation.

Based on the foundation of Confucianism, Koreans were also influenced by Christianity that was introduced in the 1780s. The Christian population has increased in the past several decades, and Christianity has now become the most popular religion in Korea (Park, Hong, Park, & Cho, 2012). According to Statistics Korea in 2005, thirty four point five percent of Korean population with religion identified as Christian (Statistics Korea, 2005). Instead of hostility with Confucian social customs and family values, Christianity in Korean harmonizes with Confucianism and traditional Korean religious culture (Lee, 2002). Christianity's emphasis on moral values is congruent with Koreans' emphasis on the importance of social and moral values related to Confucian ideology (Kim, 2000). Although the Christian population has been increasing in Korea, the Confucian social and cultural values are still significant. Therefore, understanding the goals and beliefs of Confucian values in Korea can enhance our knowledge base concerning the everyday cognitive, social, and behavioral activities that contribute to adolescent development.

Third, the role of parenting behaviors in influencing overt, relational, and cyber aggression among adolescents cannot be underestimated. Parenting plays an important role in increasing children's and adolescents' capabilities and completion of developmental tasks, including emotional security, behavioral independence, social competence, and intellectual achievement (Belsky, Lerner, & Spanier, 1984). Various dimensions of

parenting behaviors (parental support and warmth, psychological control and behavioral control, restrictiveness, harsh discipline, monitoring) have been linked to aggressive behaviors (Barber, Olsen, & Shagle, 1994; Maccoby & Martin, 1983). Parenting typologies (authoritarianism, permissiveness, and authoritative) have also been linked to academic achievement, psychosocial development, behavior problems, and psychological symptoms in children and adolescents (Dornbusch, Ritter, Liederman, Roberts, & Fraleigh, 1987; Lamborn, Mounts, Steinberg, & Dornbusch, 1991, Steinberg, Lamborn, Dornbusch, & Darling, 1992). Baumrind's parenting framework is particularly pertinent because it links the components of family interaction to adolescent's behavioral competence. Baumrind (1971 & 1991) found a variety of different correlations between parenting styles and aggressive behaviors. Previous research suggested that authoritarianism and permissiveness is associated with higher levels of aggression (e.g., Maccoby & Martin, 1983; Rubin, Stewart, & Chen, 1995). On the other hand, authoritative is beneficial for several ages of individual ranging from preschool years to early adulthood (Baumrind, 1991).

Statement of Problem

Studies on the association between adolescents' personality traits and adolescent overt, relational, and cyber aggression are limited and findings across research studies are inconsistent. The relationship between personality framework and behavior problems focused on children (e.g., Asendorpf & van Aken, 1999; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998) and adults (e.g., Asendorpf, Borkenau, Ostendorf, & Van Aken, 2001), while very few focused on adolescents (Dubas, Gerris, Janssens, & Vermulst, 2002;

Van Aken, Van Lieshout, Scholte, & Haselager, 2002) and studies linking adolescents' personality traits and overt, relational, and cyber aggression among adolescents are limited. In addition, similar to investigations conducted in the West, studies with South Korean samples have demonstrated that boys are more likely to engage in overt aggression than girls and that girls show more relational aggressive aggression than boys (Lee, 1998; Lee, 2006). However, given the paucity of studies on overt and relational aggression among Korean girls, it is important to study aggressive behaviors among Korean adolescent girls.

Not only should the direct links between personality dimensions and adolescent overt, relational, and cyber aggression be further explored, there is also a need for additional research on the indirect effects between personality dimensions and adolescent aggressive problems through parenting styles in Korean families (Jeoung, 2007; Lee, 1998; Park, 2001). Much of the prior research has found that European adolescents with a positive personality are less likely to engage in aggression when they have parents who engage in effective parenting styles. However, few investigations have examined the relationship between Korean adolescents' personality domains and their aggressive behaviors through Korean parenting styles. Therefore, it is necessary to investigate the relationship between Korean adolescents' personality traits and their aggressive outcomes via parenting styles because the findings may be different from or similar to adolescents from other cultural communities.

The measurement of adolescent personality traits in previous research has relied on parents and teachers (and sometimes the adolescents themselves) to provide personality

information for adolescents (Gleason et al., 2004; Manders, Scholte, Janssens, & De Bruyn, 2006; Prinzie, Onghena, & Hellinckx, 2005). While all three perspectives are needed to develop an accurate measurement, assessing personality traits based on adolescents' self-rating is especially important because personality domains describe internal and external feelings and changes in individual's everyday life. By gathering information about personality from adolescents, the result of this study will determine if adolescents' perceptions of their personality traits show the meaningful and significant findings.

Second, there are few studies that have linked cultural values and adolescent overt, relational, and cyber aggression (Bergeron & Schneider, 2005; French et al., 2002). Because previous findings are not wholly conclusive about whether the effects are positive or negative, the impact of cultural values on adolescent aggression needs to be studied further in the contexts of specific cultures. The reason to consider the cultural values as an important factor influencing adolescent aggression is that such values-that are transmitted among members of society and that comprise the rules and norms that promote stable and harmonious relationships with others-provide models by which adolescents form patterns of behaviors (Rogoff, 2003). In the present study, Confucian values were investigated as having a profound impact on adolescent aggressive behaviors. The Confucian values form the foundational ideology of Korean society and thus impact family life extensively, including how children and their parents understand their family and cultural roles and values, how children interact with others, and how children maintain their relationships with parents and other people. Therefore, Confucian values will be meaningful to address while working to

understand how Korean adolescents comprise their personalities and behaviors based on their cultural and social values.

Overview of the Study

The primary goal of the present study is to examine the associations among adolescent personality traits, Confucian values, parenting styles (and psychological control), and outcomes of overt, relational, and cyber aggressive behaviors in South Korean families. Few studies have been conducted to examine these variables that have important implications for adolescent aggressive behavior. Given that adolescents who have negative personality traits and show low levels of Confucian values have an increased likelihood of behavioral difficulties, this study aims to investigate to what extent the interrelated factors of adolescent personality traits, parenting styles, and Confucian values might provide insight into positive and negative associations of adolescent overt, relational, and cyber aggression.

When Korean adolescents are in middle school, they have an increased risk for the development of disruptive behavioral problems, such as aggression, potentially due to more distant relationships with their parents, more possibilities to engage in negative behaviors among peers, and more pressure on their educational success. Hence, adolescents in middle school are targeted to research this study. In addition, researching these risk factors for this age group may also contribute to designing and implementing intervention and prevention programs, including a mixture of school guidance and counseling activities and psychological and behavioral treatment approaches.

It is also anticipated that parenting typologies directly impact adolescents' aggressive behaviors. Parenting styles are still an essential factor in adolescents' development even though adolescents spend more time at school where they are influenced by their peers and teachers. To date, few studies have investigated the indirect effect of parenting styles among adolescent personality domains, Confucian values, and their overt, relational, and cyber aggression among Korean adolescents in middle school. Therefore, this study will allow for an understanding of how the parenting style functions as an indirect link among adolescent personality factors, Confucian values, and overt, relational, and cyber aggressive behaviors.

This study also uses cyber aggression and relational aggression separately. Cyber aggression is categorized as a relational or indirect form of aggression because it is an intentional attempt to inflict direct or indirect harm on another person by manipulation and damaging peer relationships (Berger, 2007). Although cyber aggression is considered as a way to describe and understand relational aggression, it is a unique aspect of relational aggression because adolescents use new technologies (electronics and cyberspace) as a method to insult, threaten, and intimidate another person (Sontag, Clemans, Graber, & Lyndon, 2011). In addition, adolescents can be anonymous in cyberspace, and they can harass another person 24 hours a day. Therefore, this study uses cyber aggression and relational aggression (implying face-to-face interaction) separately to ascertain how anonymity of cyber aggression is used by adolescents to engage in hostile and aggressive behaviors.

CHAPTER II

Korean Culture

In this chapter, traditional and contemporary values, the role of parents, and gender expectations in Korean society are discussed.

Traditional Korean Culture

Confucianism was considered the cornerstone of traditional Korean society (Jang, 2003) and emphasized the importance of filial piety, collectivism, endurance, harmony, bonds of affection, and clear gender roles and expectations in all family and social relationships (Hyun, 2001). Among all social relationships, the family was given the highest priority in Korean society and children were expected to remain emotionally and financially reliant on their parents (Macdonald, 1996). In Confucian based societies, patriarchy was central and plays an important role in maintaining social harmony (Kim & Choi, 1994). Harmony preserves a family and in group-oriented societies and social harmony was maintained through indirect communications among members as direct communication was thought to lead to injured feelings among members (Song & Meek, 1998; Yum, 1988). In traditional Korean society, order was maintained through distinct marital role expectations, love between parents and children, duty between ruler and subjects, deference to the elderly, and faith between friends (Yi, 1993; Hyun, 2001).

Confucian ideologies contributed to the development of collectivism in Korean society. Collectivism is a social pattern in which people view themselves as members of one or more social groups (Triandis, 1995). In collectivistic societies, the family, society, and

community are considered more important than the individuals who comprise it (e.g., Triandis, 1995). Collectivism emphasizes connectedness, harmony, and emotional dependence (Kim & Choi, 1994) and collectivistic societies are influenced by common goals, values, norms, and attitudes, which includes respect for authority. The collectivist orientation in traditional Korean society was captured by the term *Jeong*: the emotional bond among family members or social groups. It meant that family members were required to consider others' needs and emotions, share, care, and trust each other in order to maintain harmonious interpersonal relationships (Choi, Kim, & Choi, 1993). The family was considered the model for all social relationships and family members were encouraged to develop similar collective relationships in school and in the workplace (Choi et al., 1993).

Traditional Korean Family

Roles of Fathers and Mothers. In agrarian Korean societies, three-generation family members often lived under the same roof (Kim, Park, Kwon, & Koo, 2005). Each person in the family had a specific situational role (Kim, 2000). For example, the husband was the head of the family and had the authority to decide on all family issues (Kim et al., 2005). Women's roles were considered subordinate to that of their husbands (Kim & Hopper-Graff, 2001). Mothers and fathers also had distinctive roles and responsibilities vis-à-vis their children. Korean fathers were expected to be strict and strong and Korean mothers were expected to be submissive and lenient (Kim & Choi, 1994). Fathers were expected to be the financial providers and responsible for ensuring their family's well-being at home and in society (Kim & Choi, 1994). Fathers are expected to sire a son who would continue the

family lineage. This preference for sons still continues in Korean society (Kim et al., 2005).

Fathers are considered the liaison between their families and the rest of the world. Information, resources, and knowledge about the outside world were traditionally filtered through fathers who were the families' link to the outside world. In contrast, Korean mothers were responsible for managing the household and its finances and for raising children to respect and obey their fathers. Mothers were responsible for teaching their children the family values of their fathers' family (Cho & Shin, 1996; Kim et al., 2005). Mothers were to be the emotional center of their families, and expected to have close relationships with their children than fathers and also expected to look after elderly parents and relatives (Kim et al., 2005).

Confucian principles placed a great deal of importance on filial piety. Filial piety guided the basic values of the parent and child relationships within the family and functions as the central principle of Korean social relationships (Chung, 1992). The most important element of filial piety was that children meet their parents' expectations and show respect, obedience, and conformity to them (Kim, 2006). In return, parents demonstrated love, protection, wisdom, and benevolence to their children (Kim, 2000; Yi, 1993).

Gender Expectations of Sons and Daughters. In traditional Korean families, sons were socialized to be the leaders and breadwinners of their families thereby continuing the lineage and providing support to their parents and grandparents. In Korea, the eldest son inherited the family property in exchange for looking after his parents when they become old and holding memorial services for his ancestors. In the absence of the father, the eldest

son became the head of the family and had authority over the women in his family (Kim et al., 2005). Sons were given greater independence and encouraged to explore the world outside of their homes (Drachman, Kwon-Ahn, & Paulino, 1996). In contrast, the daughters were expected to help their mothers in preparing meals, cleaning the house and doing other household chores (Drachman et al., 1996). Upon marriage, the daughter was considered a member of her husband's family. Until marriage, daughters were expected to stay at home (Min, 1998) and when married they had responsibilities and expectations as wives and they distanced themselves from their family of birth (Kim et al., 2005).

Contemporary Korean Family Structure

Like other developing societies, Korean society has been changing rapidly since the 1960s due to industrialization, urbanization, and economic development (Hyun, 2001). Many Koreans today are caught between following their ancient traditions and newer cultural influences (Hyun, 2001). It is believed that beliefs in traditional Confucian values are on the decline.

Family Structure. There have been significant changes to the Korean family structure over the last 40 years. The number of traditional stem families has decreased from 18.4% in 1970 to 6.2% in 2010 whereas the number of nuclear family households increased from 71.5% in 1970 to 82.3% in 2010 (KNSO, 2011). Families have transformed from traditional Confucian/collectivistic modes of organization to more individualistic units of organization (Hyun, 2001; KNSO, 2011).

Family Size and Marriage. Household size in Korean society has decreased over the

last 50 years. The average Korean household was 5.7 in 1960, compared to 2.69 in 2010 (KNSO, 2011). The crude marriage rate (the number of marriages per 1,000 people) declined from 9.2% in 1970 to 6.5% in 2010 (KNSO, 2011). Furthermore, both men and women are entering into marriage later and the number of people remaining single while completing their education has increased. The crude divorce rate (numbers of divorces per 1,000 people) rose from 0.4% in 1970 to 3.4% in 2003 and decreased from 2.9% in 2004 to 2.3% in 2010 (KNSO, 2011). As a result of social change and the burden of child rearing, fertility rates have been declining. Korea has one of the lowest birthrates among OECD countries and the dwindling birthrate has been regarded a serious social problem. The birthrate (the number of births per 1,000 people) was 4.53 people in 1970, 1.08 people in 2005, and 1.20 people in 2010 (KNSO, 2011). More couples today are choosing either to have no children or to have only one child.

Changing Attitudes about Family Relationships. The increasing divorce rate, decreasing birth rate, and delayed marriages are all markers of the cultural shifts that are happening in Korean society (Park, 2005; Seo, 2002). Few Koreans today hold on to traditional social values that limit their rights to decide about marriage, divorce, and parenthood. The relationships between husbands and wives and between parents and children are undergoing rapid change (Lee, 1998). For example, the authority of fathers has weakened, and there is more power sharing in families (Robinson, 1991).

In the past, adult children were expected to support their elderly parents emotionally and financially but younger generations today depend more on their parents for emotional

and financial support (Lee, 1998; Park, 2005). Many married couples live separately from their parents but still continue to depend on them for childcare and economic aid. For the younger generations, the family is a source of support that they often take for granted. At the same time, parents make sacrifices for their children without expecting anything in return (Lee, 1998; Park, 2005).

Women's Role. As more Korean women have entered the work force over the last decade, discussions on women's rights issues in Korea has also increased. Korean society has become more accepting of egalitarian gender roles within the family, valuing mutual love and giving less preference to traditional values that underlined one-sided obedience and sacrifice (Cho & Shin, 1996). As a result, expectations of greater paternal involvement with childrearing and domestic households have risen (Kim, 2002; Park & Cho, 1995). Younger mothers today are more likely to hold Western values and encourage their children to be socially assertive and independent (Park & Cho, 1995).

As Korea continues to make the transition to a more global economy, there is great diversity in the role of Confucianism values and principles in Korean families.

Review of Literature

In this section a comprehensive review of studies on the nature of adolescent aggressive behaviors, Big Five Personality Traits, effects of adolescents personality traits on aggressive behavior problems, relationship between Confucian values and adolescents aggressive behaviors, relationship between parenting styles and adolescent outcomes, and parenting styles as an indirect effect between adolescent personality traits and adolescent

aggression are discussed.

Nature of Adolescent Aggressive Behavior

Aggression is one of the most frequent problem behaviors in adolescence (Crick et al., 2002; Prinstein et al., 2001). Aggression has typically been defined as the use of adverse behaviors that are intended to psychologically or physically harm or hurt others or property (Archer & Coyne, 2005). Researchers have delineated several different forms of aggression, including overt aggression and relational aggression. Overt aggression includes physical and verbal aggression and relational aggression includes social and indirect aggression (Crick & Grotpeter, 1995; Crick, Werner, Casas, O'Brien, Nelson, Grotpeter, & Markon, 1999).

The majority of research on aggression has focused on boys almost to exclusion of girls (Crick et al., 1999). Studies that have compared boys and girls on aggressive behaviors have indicated inconsistent findings. A significant number of studies have noted that males are more physically aggressive than females (e.g., Coie & Dodge, 1998). Boys appear to show more overt and physical aggression while girls appear to engage in more relational or indirect aggression (Coie & Dodge, 1998; Crick & Grotpeter, 1995).

Recent studies have reported that girls exhibit higher levels of relational aggression in both Western and Asian samples (French et al., 2002; Nelson, Hart, Yang, Olsen, & Jin, 2006; Ostrove, Crick, & Stauffacher, 2006). French and others (2002) examined the differences between boys' and girls' relational aggression in Indonesian and American children in 5th and 8th grades, and found that girls in both countries were described by their

female peers as engaging in relational aggression more frequently than the boys. In a study in China, Nelson and others (2006) found that relational aggression in girls was predominantly linked to psychological control. Studies have reported that Korean boys display more overtly aggressive behaviors than girls, and that girls exhibited more relationally aggressive behaviors than boys (Lee, 1998; Yoo, Kim, & Han, 2002).

Although a significant number of studies have found that boys indicate more overt and physical aggression than girls, some research studies have shown that boys tend to exhibit more relational aggression than girls (Goldstein, Tisak, & Boxer, 2002; Henington, Hughes, Cavell, & Thompson, 1998). In a study of preschool children, Goldstein, Tisak, and Boxer (2002) found that boys reported more relational aggression than girls. Salmivalli and Kaukiainen (2004) found that boys show both more physical aggression and relational aggression than girls in their study of 526 Finnish children aged 10, 12, and 14 years. Tomada and Schneider (1997) examined the gender differences in overt and relational aggression with Italian elementary children, and found that boys reported higher than girls in both overt and relational aggression. Peets and Kikas (2006) found that in Estonia boys were more likely to show both direct and indirect aggression than girls.

Other studies have indicated no gender differences in relational aggression (Crick et al., 1996; Delveaux & Daniels, 2000; Kim, 2009; Richardson & Green, 1999). Galen and Underwood (1997) did not find any differences between middle-school-aged boys and girls on relational aggressive behaviors. Two studies in Korean adolescents and Canadian children conducted by Kim (2009) and Delveaux and Daniels (2000) found no gender

differences in relational aggression but boys exhibited more physical aggression than girls.

These inconsistent findings may be explained by the method of measurement of aggression including self-reports, parent-reports, teacher-reports, and peer-reports; children's developmental stage, and cultural differences (e.g., Archer & Coyne 2005; Crick & Zahn-Waxler, 2003; Little, Brauner, Jones, Nock, & Hawley, 2003; Zimmer-Gembeck, Geiger, & Crick, 2005). However, taken together, a greater preponderance of study findings suggest that girls tend to use relational or indirect aggression than boys and boys engaging in more physical aggression than girls.

Big Five Personality Traits

Allport (1937) and Murray (1938) recognized the need for a framework on personality traits and identified personality as the psychosocial dynamics that determine a person's characteristics and thoughts. Cattell (1943) revised the framework proposed by Allport and used factor analysis techniques to cluster the ratings of personality descriptions. Fiske (1949) created simplified descriptions from Cattell's personality rating scale. Fiske's study identified five factors, namely social adaptability, emotional control, conformity, inquiring Intellect and confident self-expression (Fiske, 1949). During the 1960s, researchers used the five-factor domains developed by Fiske (e.g, Borgatta, 1964; Norman, 1963; Tupes & Christal, 1961). For example, Tupes and Christal (1961) conducted a study to identify these factors using eight large samples, ranging from airmen to graduate students, and included a variety of individual ratings by peers, supervisors, teachers, or experienced clinicians, military training courses, and sorority houses. They found five recurring factors: Surgency,

agreeableness, dependability, emotional stability, and culture (John & Srivastava, 1999). Norman (1963) identified a five-factor structure - Extroversion, agreeableness, conscientiousness, emotional stability and culture. These factors became known as the “Big Five” (Goldberg, 1981). Rather than reducing personality differences to five traits, the Big Five personality factors demonstrate personality as broad categories, and each domain represents more specific and accurate personality characteristics (John & Srivastava, 1999). The Five Factor model or Big Five dimension of personality has been consistently identified in studies using self and peer reports on personality-relevant adjectives and questionnaire items. Since the mid-1980s, research on the Big Five personality framework has increased dramatically and researchers have developed new instruments that provide more accurate and useful measurements of the personality constructs (Goldberg, 1981; McCrae & Costa, 1985). McCrae and Costa (1985, 1997) developed the Five-Factor model by identifying the similarities between their work and that of earlier trait researchers. The Five-Factor model - Agreeableness, extraversion, neuroticism, openness to experience, and conscientiousness, is now commonly used by researchers for its convenience and cost-effectiveness (Costa & McCrae, 1991; Digman, 1990).

Effects of Adolescent Personality Traits on Aggressive Behavior Problems

Adolescents who possess positive personality traits are at significantly lower risk of developing behavioral problems (Ehrler et al., 1999; Heaven, 1996; Loukas, Krull, Chassin, & Carle, 2000). Studies have found that agreeableness and conscientiousness are negatively associated with children's and adolescents' aggression (Jensen-Campbell, Gleason, Adams,

& Malcolm, 2003; Gleason et al., 2004; Miller et al., 2003; Prinzie, Onghena, Hellinckx, Grietens, Ghesquiere, & Colpin, 2003, 2004). Gleason and others (2004) examined the relationship between adolescents' personality dimensions of agreeableness and direct and indirect aggression using a multi-method approach. Two Belgian studies conducted by Prinzie and others (2003, 2004) found that children with low levels of agreeableness, low levels of conscientiousness, and high levels of extraversion had higher levels of overt and relational aggressive problem behaviors. Children and adolescents who scored higher in extraversion and neuroticism were more likely to engage in aggressive and bullying behaviors (Akse, Hale III, Engels, Raaijmakers, & Meeus, 2005; Menesini, Camodeca, & Nocentini, 2010; Romero, Luengo, & Sobral, 2001). For example, Romero and others (2001) investigated the links between personality types and antisocial behaviors such as aggression with high school adolescents and college students in Spain. The findings indicated that adolescents with high neuroticism tended to have higher levels of aggressive behaviors. Girls who were highly extroverted were more likely to be delinquent than boys with high extroversion personality trait. Akse and others (2005) investigated the association between personality frameworks and aggression and depression with 1,142 early and middle adolescents. The results indicated that adolescents who were more neurotic were more likely to be aggressive and depressive. On the other hand, the study by Miller and others (2003) found that adolescents' neuroticism was not associated with aggression.

Low extraversion, high agreeableness, high conscientiousness, and high emotional stability were significantly related to decreases in externalizing behaviors (John et al., 1994;

Manders et al., 2006; Prinzie et al., 2003). Agreeableness was negatively related to externalizing problem behaviors while openness to experience did not have any association with externalizing problem behavior. In Belgian families, children with low levels of agreeableness and emotional stability displayed higher rates of externalizing problem behaviors. At the same time, children who scored high in extraversion and low in conscientiousness did not show a higher rate of externalizing behaviors (Prinzie et al., 2005). In conclusion, the findings of externalizing behaviors support that high agreeableness, conscientiousness, and emotional stability were related with children's fewer externalizing behaviors whereas low levels of extraversion and neuroticism were related to lower levels of externalizing behaviors.

Studies have revealed significant relationships between personality traits and behavior problems among Korean adolescents (Cho, 2006; Kim & Kim, 2004; Lee, 2010; Youn, 1995). Lee (2010) investigated the relationships between personal and interpersonal traits and aggressive and bullying behavior in a sample of 1,238 Korean middle school adolescents. The findings indicated that adolescents with high levels of extraversion were related with covertly and overtly aggressive behaviors. These findings were consistent with a previous study conducted by Youn (1995) suggesting children who showed high levels of aggression were less likely to show agreeableness, extraversion, and conscientiousness than children with low levels of aggression among children in 6th grade. With effects of neuroticism personality trait on adolescents' aggression, Cho (2006) found that neuroticism was positively associated with adolescents' aggressive behaviors toward teachers at school.

To summarize, these findings suggest that the children and adolescents with high agreeableness, conscientiousness, and openness to experience were associated with fewer overt and relational aggressive behavior problems, whereas children and adolescents with low neuroticism and extraversion were related to fewer overt and relational aggressive behavior problems in North American and European studies. To summarize the Korean studies, children with high agreeableness, conscientiousness, and extraversion were associated with fewer overt and relational aggressive behavior problems. Children with high neuroticism were positively related with overt and relational aggression. Although the findings of American and Korean studies of agreeableness and conscientiousness are similar, it is impossible to conclude whether personality traits positively or negatively affect adolescents' overt and relational aggression. Therefore, more studies are needed to determine the association between personality domains and aggression in different ethnic/cultural groups.

Relationship between Confucian Values and Adolescent Aggressive Behavior

Each nation has cultural elements which influence the social beliefs, institutions, customs, and practices and which relate to all aspects of individual behavior (Schwartz, 1999; Smith & Schwartz, 1997). Such cultural contexts influence the social and behavioral development of children and adolescents (Chen & French, 2008). In a meta analysis, Bergeron and Schneider (2005) sought to determine whether cross-national differences in aggression could be predicted from differences in national values with 36 studies. The findings indicated that members of countries characterized by collectivist values, high

moral discipline, a high level of egalitarian commitment, and a heavy emphasis on Confucian culture exhibited lower levels of aggression than members of individualistic societies. The findings were consistent with a previous research (Loo & Rapport, 1998) suggesting that children in Caucasian and Hawaiian ethnic groups reported higher rates of behavior problems than children in the Asian group such as Chinese, Japanese, Korean, and Southeast Asian.

Similar findings have been indicated for Korean children and adolescents. Park and others (2003) also found that Korean adolescents are much less likely to show aggressive behaviors to a peer group than Japanese and US adolescents (Park, Killen, Crystal, & Watanabe, 2003). The finding was consistent with a study by Langfeldt (1992) that compared behavior problem between Korean and German children. German children were more likely to show aggressive behavior problems than Korean children. In a study of Korean American adolescents, Shrake and Rhee (2004) found that adolescents who felt a sense of belonging to their ethnic group were less likely to show problem behaviors. In contrast, several studies have revealed no differences in or other mixed results on aggression between individualistic and collectivistic society. For instance, Indonesian children reported more physical aggression than children in the US, and research did not find any significant results on relational aggression between the two groups (French et al., 2002). In a study of Japanese and Spanish students, Japanese students reported more physical aggression than their Spanish counterparts, who reported more verbal aggression than Japanese students (Ramirez et al., 2001).

Taken together, Confucian values impact not only family values and roles but also the social and behavioral development of children and adolescents in collectivistic nations. Research suggested that members of collectivistic societies may be less likely to show aggressive behaviors because such behaviors would decrease group unity (Bergeron & Schneider, 2005). In contrast, members of individualistic societies may be more accepting of aggressive behaviors (Bergeron & Schneider, 2005). Given the cultural changes occurring in Korean society as a result of globalization and urbanization, which is altering the Korean economy and increasing Koreans' exposure to other cultural experiences, further investigation of Confucian values is necessary for a comprehensive understanding of aggressive problems in Korean families.

Relationship between Parenting Styles and Adolescent Outcomes

Over the past 40 years, numerous studies have applied Baumrind's parenting framework to explain variations in patterns of academic achievement, psychosocial development, behavior problems, and psychological symptoms in children and adolescents (e.g., Dornbusch et al., 1987; Lamborn et al., 1991, Steinberg et al., 1992). Studies conducted with European Americans indicated that authoritative parenting styles were associated with positive child well-being, whereas the authoritarian parenting styles were associated with negative child outcomes (Dornbusch et al., 1987; Steinberg, Lamborn, Daring, Mounts, & Dornbusch, 1994). In contrast, studies linking parenting styles and child outcomes indicate mixed findings among Asians and Asian Americans. Kim and Rohner (2002) indicated that authoritative parenting styles were related to adolescents' school

performances but other studies have indicated that authoritative parenting styles were unrelated to adolescents' school performances (Dornbusch et al., 1987). Authoritarian parenting styles were found to be beneficial for school performance among Asian American adolescents in a study by Steinberg et al. (1994) whereas McBride-Chang and Chang (1998) found that authoritarian parenting styles were unrelated to achievement test scores among Asian adolescents.

Several studies have linked parenting styles and children's and adolescents' aggressive behaviors (Buschgens, van Aken, Swinkels, Ormel, Verhulst, & Buitelaar, 2010; Garcia & Gracia, 2009; Pittman & Chase-Lansdale, 2001; Rodriguez, 2010; Sandstrom, 2007). Garcia and Gracia (2009) investigated the relationship between parenting styles (authoritative, authoritarian, indulgent, or neglectful) and youth outcomes with a sample of Spanish families. The results showed that adolescents who characterized their parents as authoritative scored higher on aggression than did adolescents who characterized their parents as authoritarian and neglectful. Similarly, Buschgens and others (2010) found that preadolescents in the Netherlands who characterized their parents as lacking of emotional warmth, high levels of parental rejection, and high levels of overprotection exhibited more problems with aggression, delinquency, and inattention. In addition, a Belgian study by Stevens, De Bourdeaudhuij, and Van Oost (2002) indicated that children who experienced less emotional bonding, less warmth, less personal connection, less control and discipline, and less involvement with their parents were likely to report higher levels of behavior problems than other children. Soenens and others (2007) investigated the associations

between psychologically controlling parenting and relational aggression. Using a sample of 286 adolescents in Flanders (Belgium) and their parents, they found that higher levels of both maternal and paternal psychological control positively predicted adolescents' self-reports of relational aggression (Soenens, Vansteenkiste, Goossens, Duriez, Leuven, & Niemiec, 2007).

Studies done in the US indicated that authoritative parenting was associated with lower levels of aggressive behaviors than permissive parenting and authoritarian parenting (Pittman & Chase-Lansdale, 2001; Sandstrom, 2007). Sandstrom (2007) revealed that mothers' authoritarian parenting style was positively associated with boys' levels of overt aggression and with boys' and girls' levels of relational aggression. Mothers' permissive parenting style was positively related only to relational aggression and the relationship was stronger for girls than boys. These findings were consistent with findings from previous work by Hinde, Tamplin, and Barrett (1993) indicating that mothers' permissive parenting and fathers' authoritarian parenting was associated with boys' relational aggression while mothers' permissive parenting and both parents' authoritarian parenting were related to girls' relational aggression. Children showed lower levels of physically aggressive behaviors when their parents used authoritative parenting. However, a study by Underwood and others (2008) did not support previous findings that authoritarian parenting was positively associated with both relational and physical aggression in children. The results indicated that no significant correlations between parenting styles and children's relational and physical aggression with peers (Underwood, Beron, Gentsch, Galperin, & Risser, 2008).

Joussemet and others (2008) showed that mothers' controlling attitudes were related to physical aggression (Joussemet, Vitaro, Barker, Cote, Nagin, Zoccolillo, & Tremblay, 2008). This finding was consistent with previous research showing that maternal parenting was related more to children's behavioral problems than paternal parenting (Kandel, 1990). Kandel's (1990) study also found that parents who were closer to their children reported that their children were well adjusted and did not have behavioral and control problems. On the other hand, parents who used punitive discipline or disagreed with their spouses about child discipline reported that their children were more aggressive and had more behavioral problems and were more disobedient. Similarly, Hart and others (1998) also indicated that parents' coercion, lack of responsiveness, and psychological control were associated with children's overt aggression with peers in Russian families. Children's relational aggression was related to parents' lack of responsiveness and maternal coercion (Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998). Loukas, Paulos, and Robinson (2005) examined the correlation between maternal psychological control and adolescents' use of aggression in a sample of European American and Latino adolescents. This study found that adolescents' perceived maternal psychological control was a significant predictor of both forms of peer-rated aggression in boys and girls. Unlike the findings of previous research, Murray and others (2010) found that there was no association between parental psychological control and adolescents' overt and relational aggression. Using a sample of 209 predominately African American sixth graders in a large northeastern city, results indicated that psychological control was not related to adolescent aggression (Murray,

Haynie, Howard, Cheng, & Simons-Morton, 2010).

Studies of Chinese children have been consistent in reporting the impact of ineffective parenting styles on children's overt and relational aggression (Chen, Dong, & Zhou, 1997; Chen, Liu & Li, 2000; Chen, Rubin, & Li, 1997). For instance, Chen, Dong, and Zhou (1997) found that an authoritarian parenting style was positively correlated with aggression while an authoritative parenting style was negatively correlated with adjustment problems. Chen, Liu, and Li (2000) indicated that fathers' and mothers' parenting styles had different impact on children's development. More specifically, maternal warmth predicted an emotional adjustment, whereas paternal warmth predicted later social and behavioral adjustment including social preference and aggression. In addition, paternal indulgence positively predicted later aggressive behaviors, whereas maternal indulgence was not associated with children's adjustment outcomes.

Several research studies with Korean families have found significant relationships between parenting styles and aggressive behavior problems (Doh, Kim, Park, & Hwang, 2005; Kim & Chung, 2007; Lee & Moon, 2007; Oh & Kong, 2007). For example, Oh and Kong (2007) investigated the impact of parenting behaviors on aggression among 5th and 6th grade children. The findings indicated that children whose fathers were coercive and mothers were permissive were predicted to have increased aggression. In addition, fathers' authoritarian parenting was a predictor of the children's overt and relational aggression. Similarly, Lee and Moon (2007) found that fathers' authoritarian and permissive parenting was related to increased aggression in children. Kim and Chung (2007) also found that

parental acceptance was negatively related to adolescent aggression and school violence, while parental rejection was positively related to adolescent aggression and school violence in a sample of 482 middle and high school adolescents. In other words, children who characterized their parents as less affectionate, less supportive, and more indifferent showed high levels of aggressive behaviors.

Taken together, the findings are inconsistent across cultural groups. In European samples, authoritative parenting styles were related to less aggressive behavior problems among children and adolescents. On the other hand, the association between authoritarian, authoritative parenting style and adolescent aggression showed mixed results in Asian samples. Permissive parenting style and psychological control were negatively associated with aggression in Asian studies. Therefore, investigation of parenting styles in different cultures is necessary for a comprehensive understanding of parental roles and behaviors in adolescent development.

Parenting Styles as an Indirect Effect between Adolescent Personality Traits and Adolescent Aggression

Researchers have suggested that there are indirect effects between personality framework and child and adolescent overt and relational aggression through parenting styles (De Clercq, Van Leeuwen, De Fruyt, Van Hiel, & Mervielde, 2008; Hiramura, Uji, Shikai, Chen, Matsuoka, & Kitamura, 2010; McNamara, Selig, & Hawley, 2010; Prinzie et al., 2003). Adolescents who have a positive personality are less likely to engage in aggression if they experience effective parenting styles (Hiramura et al., 2010;

Paulussen-Hoogeboom, Stams, Hermanns, Peetsma, & Van Den Wittenboer, 2008; Rubin, Burgess, Dwyer, & Hastings, 2003). Although adolescent personality and parenting styles were found to shape adolescents' development substantially, there limited research examining the indirect effect of parenting styles in children and adolescents. A study conducted by De Clercq and others (2008) found that children who have low levels of agreeableness and high levels of neuroticism showed aggressive behavioral problems when they also have highly controlling parents. Paulussen-Hoogeboom and others (2008) also examined the relationships between children's negative emotional reaction style and their aggression through parenting with Dutch children. The results indicated that the relationships between children's negative emotionality and aggressive behaviors were mediated by mothers' authoritative parenting styles. Hiramura and others (2010) examined the links between children's personality traits, parenting characteristics, and children's aggression/delinquency with a sample of 946 Japanese children. The results found that aggressive children who showed higher in extraversion were predicted by low maternal care and low maternal and paternal overprotection.

To summarize, the findings suggest that children's personality traits were related to their aggressive behaviors through positive parenting behaviors. In European and European American cultures, positive parenting styles (e.g., authoritative, exuding warmth, not coercive) were more effective in reducing overt and relational aggressive behaviors among children who have less agreeableness and conscientiousness. In contrast, the findings on extraversion and neuroticism and adolescent outcomes through parenting styles have

showed mixed results. There is no study investigating the indirect effect of parenting styles in the association between adolescent personality traits and aggressive behaviors in Korean families. Hence, this study can contribute to determining the role of parenting styles in the relationship between personality traits and overt, relational, and cyber aggression in Korean adolescents.

Theoretical Framework

The proposed conceptual framework linking adolescents' personality traits, Confucian values on overt, relational, and cyber aggression through parenting styles can be viewed from the perspective of several theoretical frameworks including cultural-ecological theory, social learning theory, family system theory, and coercion theory.

Cultural-Ecological Theory

Cultural ecological theorists (Ogbu, 1981) have pointed to the importance of understanding the cultural basis of human behaviors. Ecological theorists propose that developmental processes must be considered within a cultural and historical context. Cultural ecology is the study of the role of culture as a dynamic component of any ecosystem of which the human is a part. According to Bennett (1976), cultural ecology focuses on how an individual is influenced by his or her social structure and cultural values and how that individual applies his or her environmental influences. For example, parents from different cultures choose their child rearing techniques based on what they believe will boost their children's competencies so that their children can succeed in their society (Benetti, 1999).

Culture has been shown to influence many domains of family life, including the way in which parents socialize their children (Ogbu, 1981). Ogbu (1981) suggests that parental socialization goals might vary due to different societal and cultural demands faced by families. Specifically, he contends that parental practices and beliefs have been influenced by the cultural environment in which the family resides. Based on effective child-rearing practices as dictated by culture, children and adolescents develop the cognitive, social, and behavioral skills they need to thrive within a particular environment (Ogbu, 1981). Therefore, Ogbu (1981) argued that socialization practices of families should be considered in diverse cultural environments.

The relevance of Ogbu's framework to the present study resides in the concept of adaptation in childrearing. Basically, people adapt their child-rearing techniques based on societal needs. These societal needs are defined as the cultural tasks which are appropriate based on age, sex, and other criteria of distinction. The origin of human competence depends on the nature of culturally defined adult tasks that lead to competence as defined in the culture. Child-rearing serves as a mechanism for instilling and acquiring certain culturally defined instrumental competencies. From this framework, the social milieu of childrearing consistently relies on the same factors, and Korean parents adhere to childrearing practices based on social and environmental demands. Korean society currently uses methods of childrearing that are historically situated as it modifies its approach to instilling instrumental competencies through childrearing in a post-modern world. This speaks to the incorporation of the childrearing wisdom of prior generations

with those of succeeding generations of Korean families. However, it remains to be seen whether the parenting practices from the past- obedience, respect for authority, hard work, traditions, and the preservation of order- are the driving forces behind instrumental competence today.

Social Learning Theory

A key tenet of social learning theory is that human behavior as an interaction among cognitive, behavioral and environmental determinants (Bandura, 1977, 1986). It includes a multifactor framework that integrates cognitive psychology with traditional learning models (e.g., operant and classical conditioning), while taking into account the social contexts from which behaviors are learned (Maisto, Carey, & Bradizza, 1999). The conceptualization of social learning principles has had a prominent influence on understanding the initiation, expression, and continuation of human behaviors (Bandura, 1986). An important process that strengthens our understanding of the underlying principle of this theory is modeling, and it is a process whereby observation of another individual performing a behavior influences the likelihood of the observer engaging in that behavior (Maisto et al., 1999).

Bandura's social learning theory (Bandura, 1977) indicates that we learn to engage in aggressive behaviors through the process of social learning. Bandura (1977) hypothesized that children reproduced aggressive behaviors when they were exposed to aggressive models. Additionally, he hypothesized that aggression is maintained by reinforcements and extinguished by punishments or by the failure to earn desired rewards (Bandura, 1977). For

example, children who are positively reinforced or who observe others being positively reinforced for aggression are much more likely to persist in this behavior. Specifically, adolescents are influenced by the family, the peer group, and their environment. Therefore, adolescents maintain positive behaviors when these groups positively reinforce them. Another example is the use of aggressive behavior to attain a desired result and achieve their goals. When they are successful in getting what they need through aggression, then this behavior is reinforced and will likely be used in future to gain similar results.

Social learning theory places an emphasis on the children's environment, especially familial experiences, in understanding children's social development. Bandura's (1983) classic study highlighted how children emulate aggression through observational learning. Results have revealed that children who observed models hitting bobo dolls were more likely to engage in aggressive behavior than children who had not. As a result of the experimental observational learning process, Bandura (1977, 1983) realized that children are able to attend to what is being learned and retain information from experiences and observations through processes such as rehearsal, repetition, imitation, and elaboration. Therefore, children are able to recall information from memory when they have appropriated and cognitively organized information so that their behavior matches the models' behavior. The focus of social learning theory is on child' and adolescent' learning, which can take place vicariously through viewing the consequences of others' actions and also through reinforcement, modeling, imitation, and direct instruction.

Social learning theory explains that children and adolescents learn aggressive

behaviors by observing parenting behaviors or through parent-child interactions (Ladd & Pettit, 2002; Sandstrom, 2007). In research studies, children who reported overt and relational aggressive behaviors were more likely to have been exposed to authoritarian and permissiveness parenting (Joussemet et al., 2008; Ladd & Pettit, 2002; Sandstrom, 2007). Rodriguez (2010) found that children's aggression was associated with dysfunctional parenting, particularly authoritarian. In addition, children who described their parents as aggressive towards each other reported more relational aggression than children with non-aggressive parents (Crick et al., 1999). Similarly, both relationally and physically aggressive children reported having parents who directed relationally aggressive behaviors towards them and who used harsh discipline. Therefore, it is evident that children and adolescents are able to recognize aggression as an acceptable and functional behavior when overt and relational aggression between the parents provides a model for aggressive behavior (Eron, Huesmann, & Zelli, 1991).

As seen the previous research, social learning theory can explain and assess whether parental attitudes and behaviors serve as a model for overt and relational aggressive behavior in children and adolescents. Children and adolescents learn aggressive behaviors through observational learning and modeling in the context of their families. In other words, parents who use ineffective and inappropriate parenting styles will encourage adolescents' overtly and relationally aggressive behavior. Social learning theory clearly indicates a theoretical framework between parent-child interactions and aggression. However, this theoretical approach fails to explain environmental influences on behavioral strategies

(Berk & Shanker, 2006). In other words, it does not explain how individual and family characteristics contribute to the development of aggression in children (Berk & Shanker, 2006). To compensate for this weakness, family systems theory can provide a theoretical framework which indicates how other aspects of the familial context can explain aggression in children and adolescents exposed to ineffective parenting and Confucian values.

Family Systems Theory

Family systems theory focuses on interactions between elements and their environment. Von Bertalanffy (1968) states that a system is greater than the sum of its parts and each family system should be understood in its entirety. Family systems theory provides a framework for how family members interact and how contextual factors impact parental and children's behaviors. Minuchin (1985, 1988) asserts that family systems theory contains its main principles of wholeness, organization, and circularity; the interdependence of system elements; homeostasis and change; and subsystem boundaries and interactions. Cox and Paley (1997) use those principles to define wholeness, hierarchical structure, adaptive self-stabilization, and adaptive self-organization. From perspective of family systems theory, Minuchin (1988) characterized a family as a "complex, integrated whole" (Minuchin, 1988, p.8). Family systems theory views the family as a complete unit in which all of the family members are interconnected (Cox & Paley, 1997). An individual family member is a part of whole family system and individual family members are embedded in their family system. Hence each family member is strongly influenced by the structure, rules, organization, and transactional patterns of the

family system (Miller, Keitner, Bishop, & Epstein, 1985).

Family system theory also focuses on attitudes and behaviors that affect interactions and communication patterns, and it can be used to understand the individual behaviors and actions within the family (Whitchurch & Constantine, 1993). For example, indirect impacts of fathers include a variety of ways in which fathers modify and mediate mother-child relationships. Conversely, mothers' indirect influences affect their children through fathers by modifying the father-child relationship. Children are also indirectly influenced by the husband-wife relationship, changing their behavior in response to the interaction between spouses (Parke, 2004).

A family is viewed as a hierarchical structure system and as a combination of subsystems, including smaller subsystems (e.g. parent-child relationships, marital relationships, and sibling relationships) as well as larger systems (e.g. community and social context) (Cox & Paley, 1997). An essential implication of any hierarchical structure is that "systems at each level do not have unidirectional control functions over those of lower levels" (Sameroff, 1983, p. 270). For example, problematic parent-child relationships may make it difficult for young children to develop good self-regulation, but children's poor self-regulation can aggravate problematic parent-child relationships (Cox & Paley, 1997). In a similar vein, filial piety contains a hierarchical structure system as individuals work to display high levels of affection, respect, duty, and obedience in Confucianism (Yi, 1993). The parent-child relationship is that children support and serve their parents based on the ideology of filial piety, and parents show their children kindness and care (Hofstede,

1991). Individual responsibility in a Confucian society requires subordinating self-interest for the sake of the other family members, and children are taught to exhibit filial piety throughout the life of the parent (Hofstede, 1991).

In family systems theory, all subsystems are defined by boundaries, and family members learn rules for relating to one another within and across these boundaries in the context of repeated interactions (Minuchin, 1974). Families draw boundaries between what is included in and what is excluded from the family system (Whitchurch & Constantine, 1993). Boundaries appear at every level of the system and between subsystems. Without completely open and clear boundaries, the family cannot function appropriately; unclear boundaries create not only problems for individual family members but also for the family (Kretchmar & Jacobvitz, 2002). Therefore, Minuchin (1974) emphasized that permeable boundaries allow the family members to be accessible for sharing resources and for communicating with one another without interference. These boundaries enable the family to establish its own sense of identity through the shared values and goals of its members.

Another characteristic of family systems framework is adaptive self-stabilization that has patterns and structure to survive, and patterns in systems tend to be circular (feedback loops); systems have homeostatic or homeorhetic tendencies that compensate for the changing environmental conditions by making coordinated changes in the internal mechanism of the system (Cox & Paley, 1997). More specifically, the patterns of the family system are stable when they are not disrupted, but the system shows adaptive self-organization when the system is challenged (Minuchin, 1974). Sameroff and Seifer (1983)

indicated that the buffering capacity leads to a reduction in the influence of the outside environment on the family. They noted that each family member contributes to the family unit by fulfilling a specific role, and the development of each member's function is regulated by a shared family code. This process enables family members to overcome negative effects of the outside environment as well as to adjust to changed conditions in the environment (Sameroff, 1989). When this concept of a family code applies to the family, it leads to a consideration of the regularities, rules, and structures that organize the family system and keep its features by giving individual members negative feedback when significant deviations occur, such as when members violate family rules or values (Cox & Paley, 1997).

Adaptive self-reorganization refers to the capability of open, living systems to adapt to change or challenge the system. It suggests that individual family members will face challenges to patterns at normative transition times (such as the birth of a child, transition to school) and non-normative transition times (e.g., death of a family member) (Cox & Paley, 1997). Family members are influenced by these disruptions at multiple levels (Cox & Paley, 1997); these challenges disorganize patterns in the system, and family members must adapt to the new circumstances.

In the family systems perspective, feedback loops are used to maintain stable functioning and to change or adapt to new demands from within or outside of the family (Cox & Paley, 1997). Feedback loops are a "path along which information can be traced from one point in a system, through one or more other parts of the system or its

environment, and back to the point of origin” (Whichurch & Constantine, 1993, p. 334).

Minuchin (1985) describes family systems theory as a circular pattern in which the effects of the individual on the family feedback create a cycle of interaction among family members. For example, a reciprocal pattern of behaviors between mother and child influence each stage of the child’s development. The influence is not considered based on behaviors of the only the mother or the child. Feedback loops can be both positive and negative. A negative feedback loop is used to maintain a condition of dynamic equilibrium. In contrast, a positive feedback loop is used to promote change (Whichurch & Constantine, 1993). However, the concepts of negative and positive do not mean either bad or good.

In summary, family systems theory provides valuable conceptual frameworks for explaining and understanding how family systems affect the parent-child relationship and the father-mother relationship through the processes and interaction patterns that are cultivated in these families. Family systems theory regarded a family as an integrated whole and not as the sum of discrete dyadic relationships. Thus, parenting may alter when the family dynamic changes and the effect of maladaptive behaviors could spread from each family member or subsystem to the others. Children’s personality characteristics are also affected by family systems.

Coercion Theory

Coercion theory emerged from the larger behavioral perspective of social learning theory. A tenet of social learning theory is that people learn behaviors through coercive interchanges and coercive punishment and later they employ these coercive behaviors in

their relations with others (Bandura, 1973). Coercion theory emphasizes the behavioral aspect of family relationships and interaction in shaping adolescent problem behaviors. Patterson and his colleagues conducted a study of antisocial behavior at the Oregon Social Learning Center with different samples (Patterson, 1982; Patterson, Reid, & Dishion, 1992; Reid & Patterson, 1989). In Patterson's work, it is important to examine how people develop particular behaviors and how they either continue or change these behaviors over time.

Patterson's coercion theory (1982) has been used to describe the relationship between parental behaviors and children's and adolescents' aggressive behavior for many years. Patterson hypothesized that family interactions could encourage or prevent aggressive behaviors in children (Patterson, 1982). He believed that different parenting styles can create a variety of behavioral outcomes for children (Larzelere & Patterson, 1990) and affect on children's perception and learning of behavior because parenting is integrated behavior that includes many attitudes, beliefs, and behaviors to influence child development (Baumrind, 1991). Coercion theory (Patterson, 1982; Patterson et al., 1992) assumes that parents of aggressive children show a lack of effective parenting and disciplines. For example, parents with coercive, cruel, punitive and restrictive parenting styles tend to raise children who engage in aggressive and antisocial behavior. As a result, children who were exposed to coercive parenting styles were shown to be involved in negative behaviors at an early age (Snyder & Patterson, 1987).

More specifically, parents reinforce adolescents' overt and relational aggression

through the use of physical punishment, inconsistent discipline and reinforcement, and limited positive parental involvement. In particular, children directly learn to act aggressively when parents use negative behaviors, threaten to punish children for their behaviors, and use harsh physical discipline. Previous studies also found that high levels of coercive and punitive discipline, including frequent reprimands, threats, and punishment appear to promote aggression in children (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Stormshak, Bierman, McMahon, & Lengua, 2000; Weiss et al., 1992). In addition, parents can unknowingly reinforce coercive behaviors in their aggressive children by nagging, scolding, and yelling when the children misbehave. These parental behaviors initiate the coercive and aggressive interaction between parents and children. Furthermore, when the parents fail to discipline their children adequately, the children learn that they can manipulate their parents into meeting their needs or demands. Thus, children become aware that if they continue to misbehave or respond to the parent's aversive behaviors with increased aggression, they can shape the parental behaviors for their own benefit (Patterson, 1982). At this point, a negative consequence of the children's misbehavior occurs for parents as the children tacitly condone their misbehaviors.

Other principles of coercion theory involve the frequency of coercive interactions and the consequences related to the use of coercive behaviors. As the frequency of aversive events increases, the interaction between parent and child is likely to escalate (Patterson, 1995). It is also possible to increase physical aggression while the duration of the conflict increases. When coercive interactions occur over time, the child learns to move quickly to

intense levels of aggressive and aversive behavior (Reid, Patterson, Loeber, 1981). In this manner the child becomes more skilled at controlling the parent. As a result, the parent feels frustrated and begins to doubt his or her ability to intervene in a confrontational situation and withdraws. At this level of coercion, the children receive consistent negative reinforcement in that they are free to explore a variety of aversive behaviors without consequence. Thus, these children's aggressive behaviors are discovered with parent-child relationships as well as in peer relationships (Patterson, 1995). Children's negative reactions also become the reason for the parental use of hostile punishment such as arguing or yelling. Therefore, there is a prevalence of aggressive behavior in children and adolescents when they interact with negative parenting styles when they experience coercive interactions with parents.

Numerous empirical studies of the impact of parenting styles on children's and adolescents' overt and relational aggression support the principles of coercion theory (Cohen & Brook, 1995; Rothbaum & Weisz, 1994). Parents' use of high levels of coercion was associated with high levels of children's overt and relational aggression (Hart et al., 1998; McFadyen-Ketchum, Bates, Dodge, & Pettit, 1996; Rothbaum & Weisz, 1994). In two studies, harsh discipline was found to exacerbate children's behavioral and conduct problems, resulting in a reduction of feelings of closeness, warmth, support, and ability to supervise from parents (Cohen & Brook, 1995; Kandel & Wu, 1995). A study conducted by Grotzinger and Crick (1996) found that physically aggressive children were more likely to have parents who were less involved, showed less warmth, and demonstrated fewer positive

parenting behaviors than children who were relationally aggressive.

Several research studies have found that maladaptive discipline styles are linked to adolescents' aggression (Patterson, 1982; Sheehan & Watson, 2008; Vissing, Straus, Gelles, & Harrop, 1991). Sheehan and Watson (2008) investigated the link between mothers' use of discipline and aggression among a predominantly Caucasian sample of children and adolescents, and found that the use of maternal aggressive discipline was predictive of an increase in aggression among children of all ages. Using a nationally representative sample, researchers examined the relationship between parents' physical and verbal aggression and adolescents' behavior problems. Adolescents whose parents showed higher rates of verbal aggression and severe physical violence exhibited higher rates of physical aggression (Vissing et al., 1991). In summary, coercion theory offers an explanation of aggressive behaviors in children and adolescents that are influenced by different parenting styles. Coercive parenting style instills coercive behavior in children and adolescents and this behavior is then transferred to other social interactions and settings, increasing aggressive and coercive relationships and behaviors.

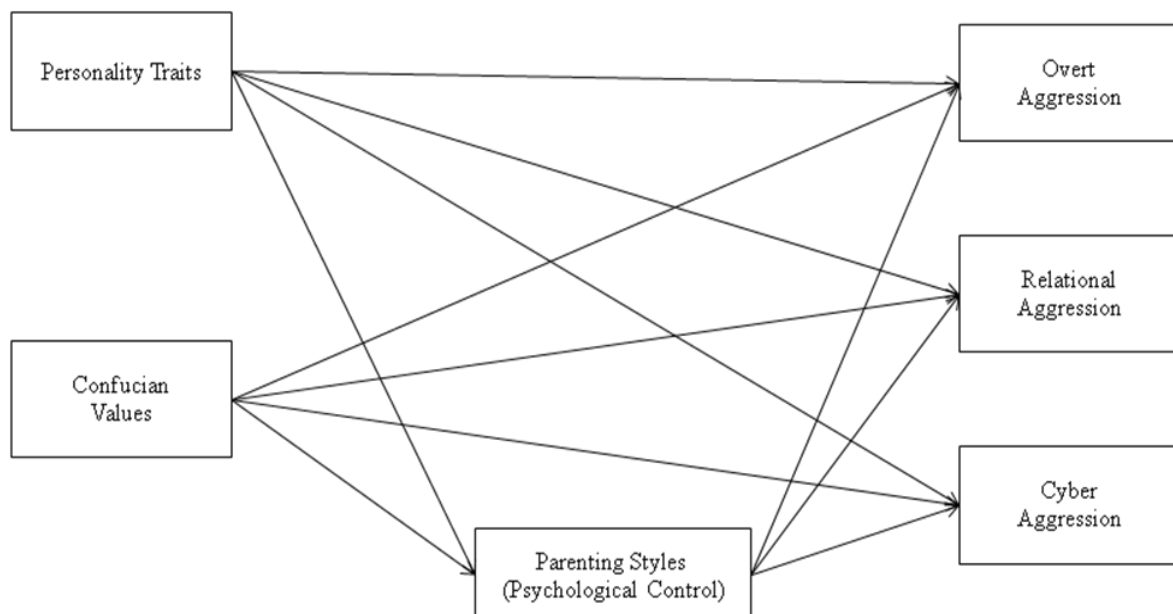
Four relative theories- cultural ecological theory, social learning theory, family systems theory, and coercion theory- are particularly relevant to the empirical literature review because each theory relies on manifest factors for their explanation of adolescent overt and relational aggression on personality traits and cultural values through parenting styles. Although each of these theoretical frameworks provides a unique perspective of the variables, they together provide a more comprehensive position that negative personality

traits and negative cultural values can have detrimental impacts of adolescents' overt and relational aggression.

Proposed Conceptual Framework

This study explores the impact of the relationships among personality traits, Confucian values, parenting styles (and psychological control), and overt, relational, and cyber aggression among Korean parents and adolescents in middle school (See Figure 1). More specifically, this study will examine the associations among adolescents' Big Five factors (Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness to Experience); Confucian values (integrity, Confucian ethos, loyalty to ideals, and moderation); parenting styles (authoritarianism, authoritativism, and permissiveness) and psychological control, and overt, relational, and cyber aggressive behaviors.

Figure 1. Conceptual Model



Most investigations linking adolescent personality characteristics, parenting styles/behaviors, and adolescent aggressive behaviors have been conducted in a piecemeal fashion – e.g., parenting styles/behaviors and adolescent aggressive behaviors (Buschgens et al., 2010; Rodriguez, 2010), adolescent personality characteristics and adolescent aggressive behaviors (Akse et al., 2005; Menesini et al., 2010; Romero et al., 2001). There are few studies that have examined the role of parenting styles/practices as a mediator in the relationship between adolescent personality traits and aggressive behaviors (De Clercq et al., 2008; Prinzie et al., 2003) and still fewer investigations have considered the role of both adolescent personality characteristics, parenting behaviors, and aggressive behaviors with Asian populations.

The hypothesized ordering of variables in this study (adolescent personality → parenting behaviors → aggressive behaviors) was based on extant research that has posited a link between adolescent personality characteristics, parenting styles/behaviors, and adolescent aggressive behaviors. However, from the perspective of family systems theory and other theoretical frameworks (e.g., coercion theory), the relationships among these constructs could be bidirectional - i.e., adolescent aggressive behaviors could influence parenting styles/behaviors (e.g., Evans, Nelson, Porter, Nelson, & Hart, 2012). Future investigations that include three or more waves of data could help test the directionality and the hypothesized ordering of these constructs.

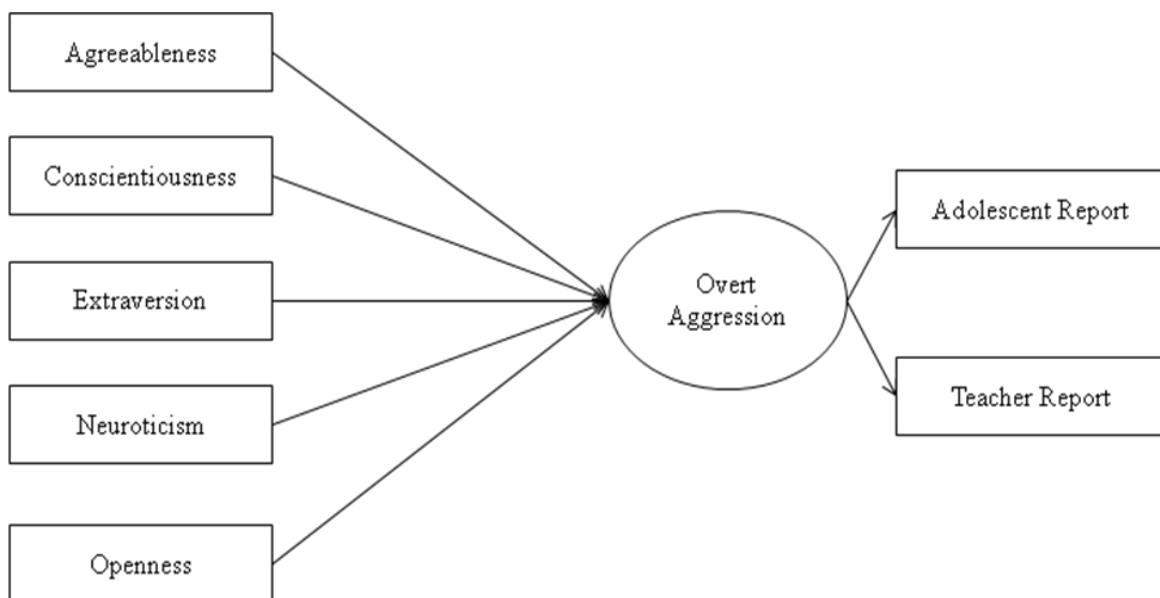
Research Questions and Hypotheses

This study investigates the relationships among adolescent personality traits,

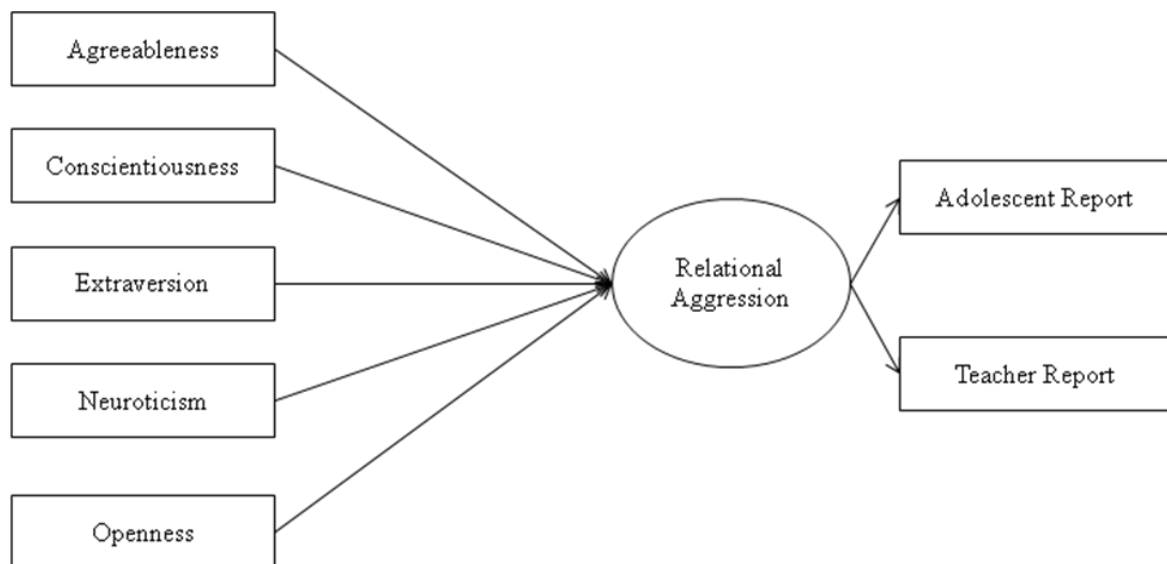
Confucian values, parenting styles and psychological control, and adolescent overt, relational, and cyber aggressive behaviors. Based on past empirical research findings and theories, the main research questions and hypotheses proposed in this study are as follows:

Research question 1. Are there direct relationships between adolescents' personality traits and overt, relational, and cyber aggression?

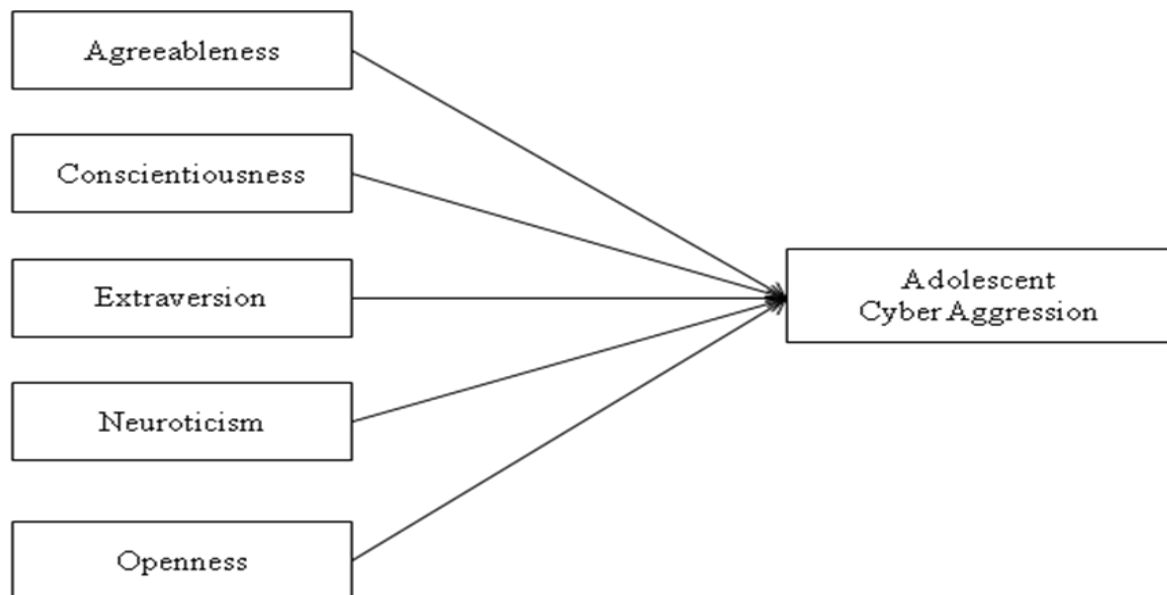
H1. 1. *Adolescents' personality traits will be associated with overt aggression.*



H1. 2. *Adolescents' personality traits will be associated with relational aggression.*

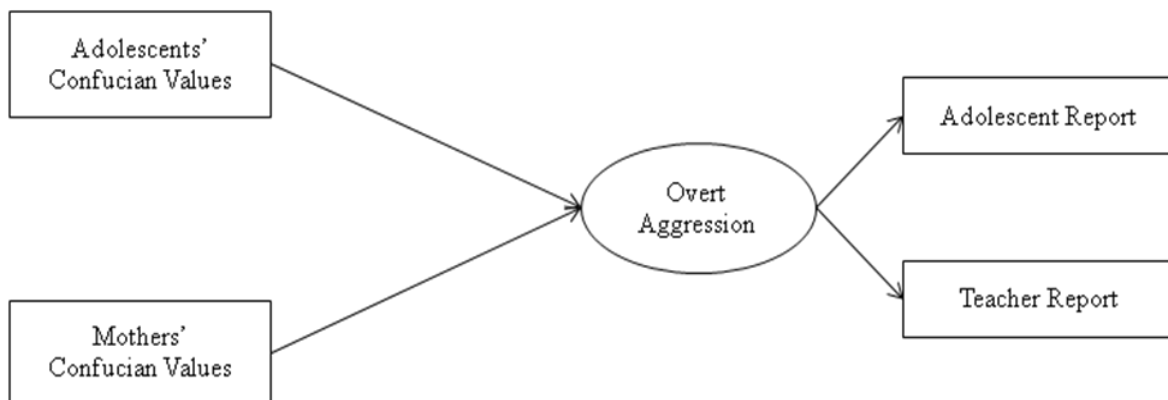


H1. 3. *Adolescents' personality traits will be associated with cyber aggression.*

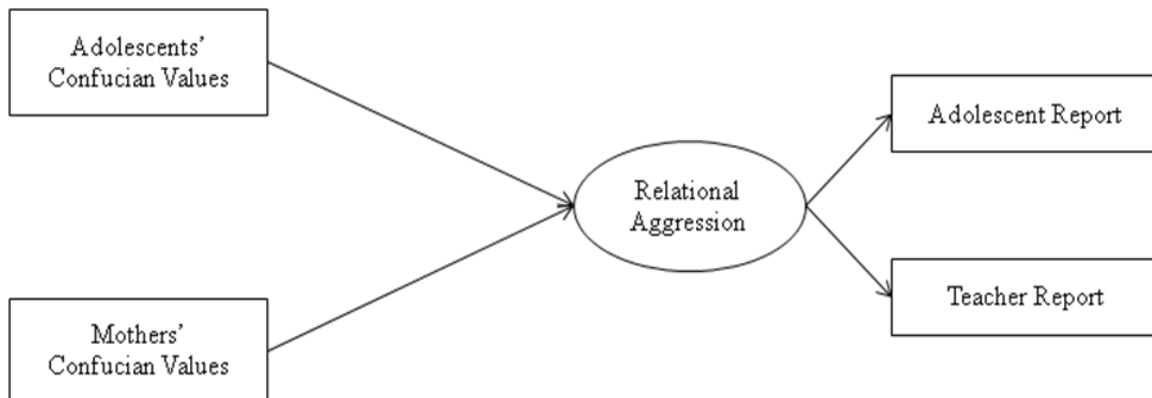


Research question 2. Are there direct relationships between Confucian values and overt, relational, and cyber aggression?

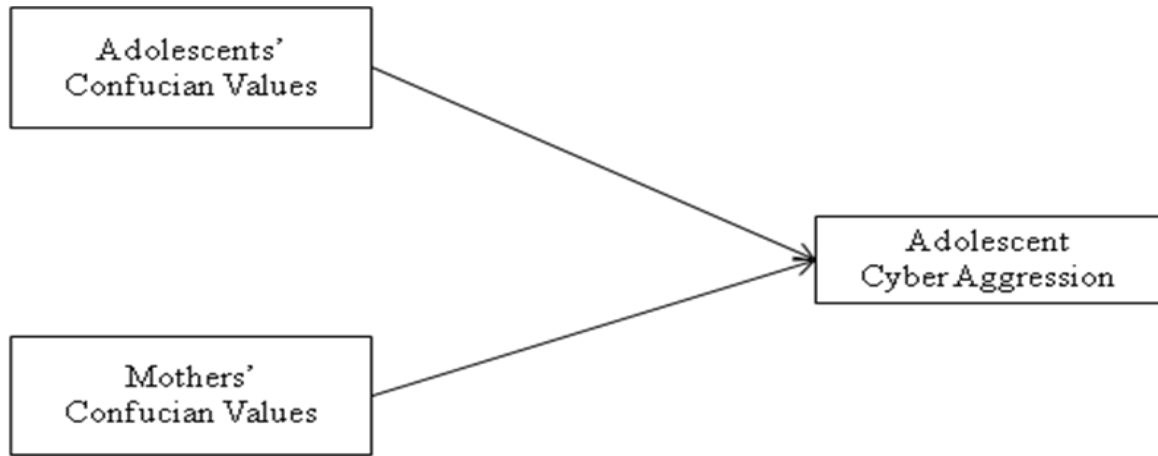
H2. 1. *Adolescents' and mothers' Confucian values will be associated with adolescents' overt aggression.*



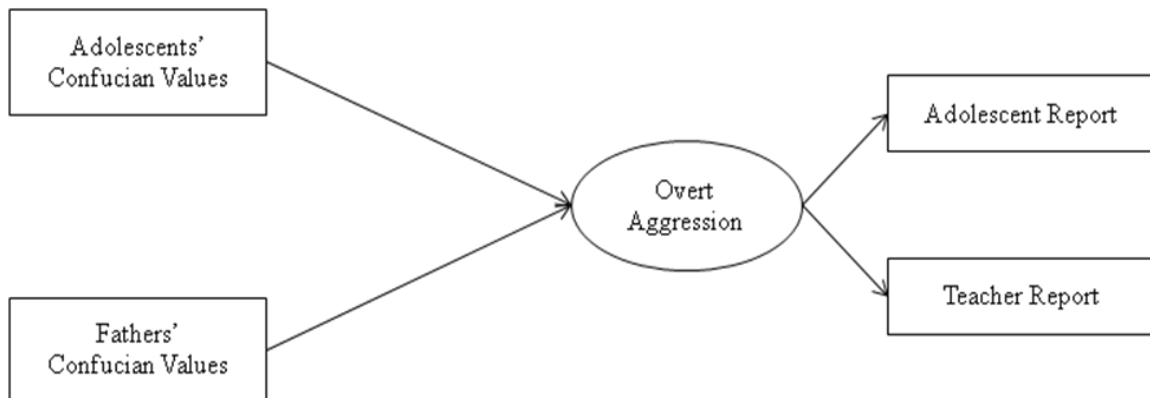
H2. 2. *Adolescents' and mothers' Confucian values will be associated with adolescents' relational aggression.*



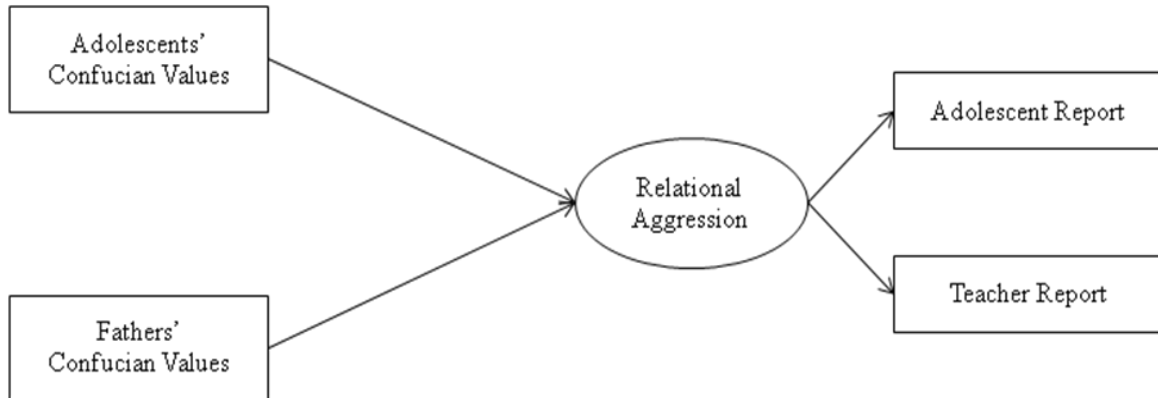
H2. 3. *Adolescents' and mothers' Confucian values will be associated with adolescents' cyber aggression.*



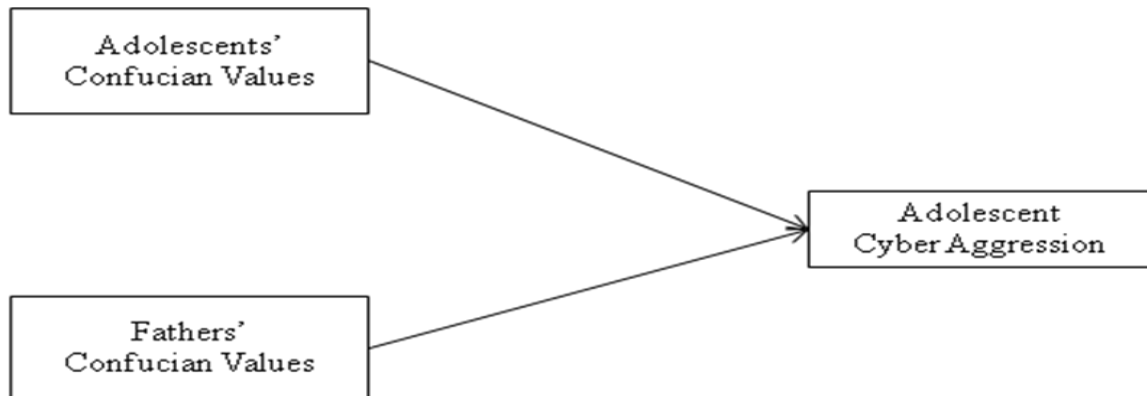
H2. 4. *Adolescents' and fathers' Confucian values will be associated with adolescents' overt aggression.*



H2. 5. *Adolescents' and fathers' Confucian values will be associated with adolescents' relational aggression.*

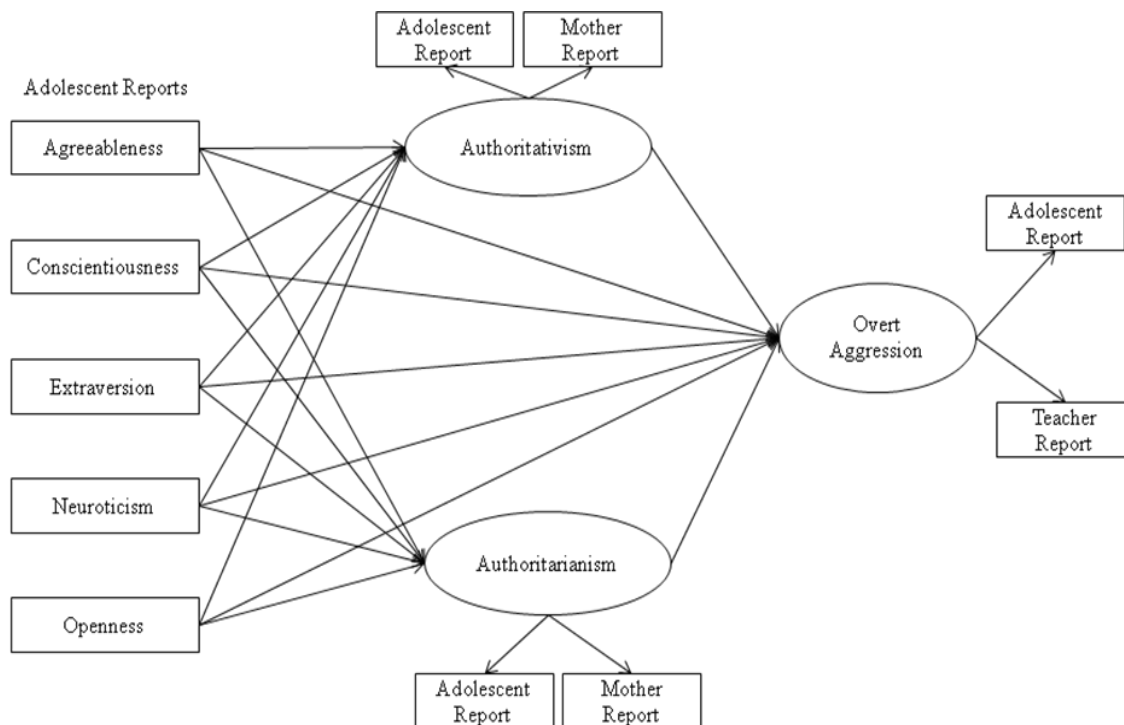


H2. 6. *Adolescents' and fathers' Confucian values will be associated with adolescents' cyber aggression.*

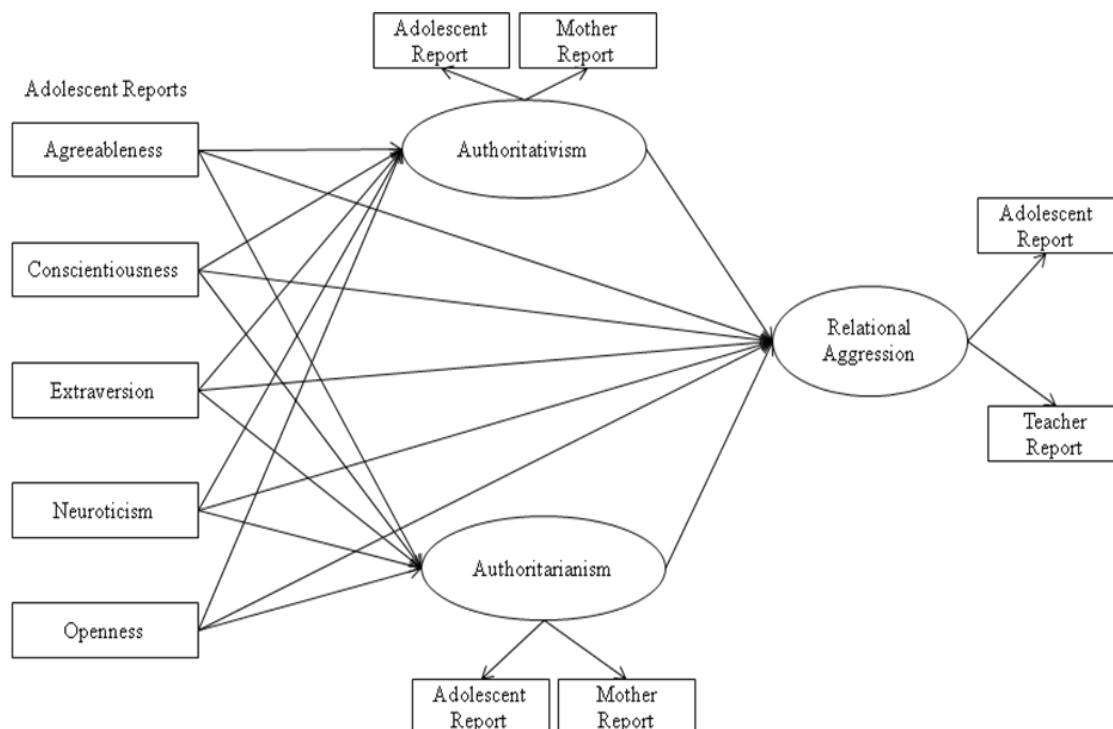


Research question 3. Do adolescents' personality traits affect overt, relational, and cyber aggression through parenting styles and psychological control?

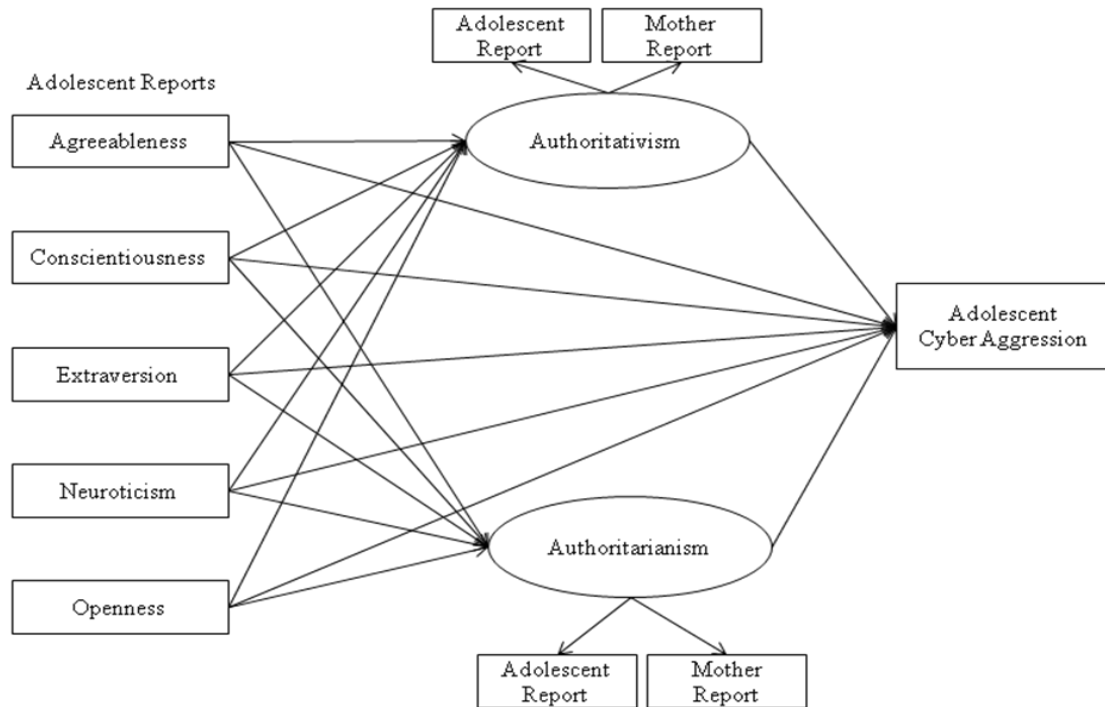
H3. 1. *Adolescents' personality traits have an effect on overt aggression through their mothers' authoritativism and authoritarianism.*



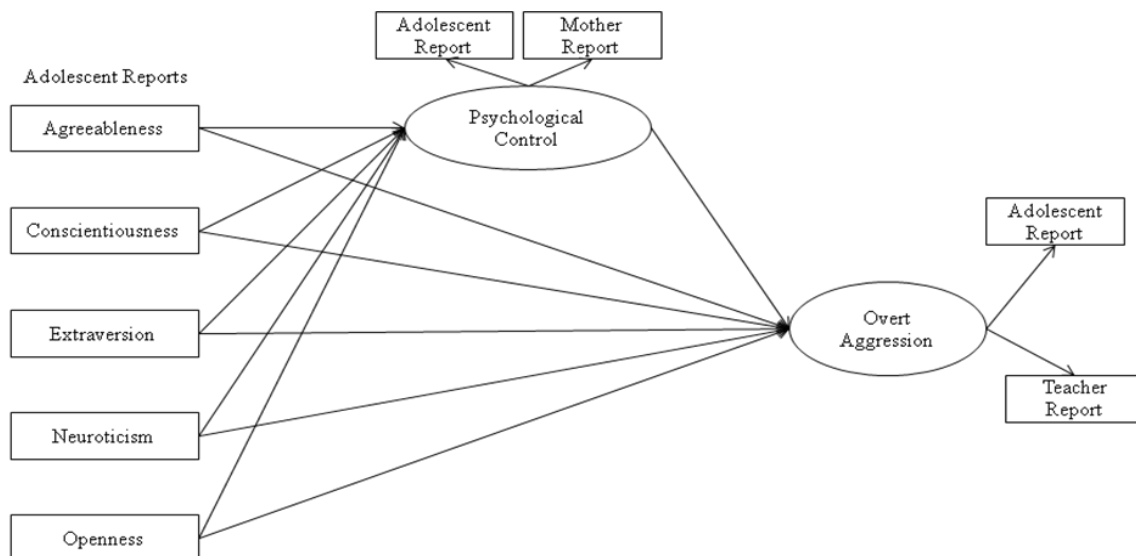
H3. 2. *Adolescents' personality traits have an effect on relational aggression through their mothers' authoritative and authoritarianism.*



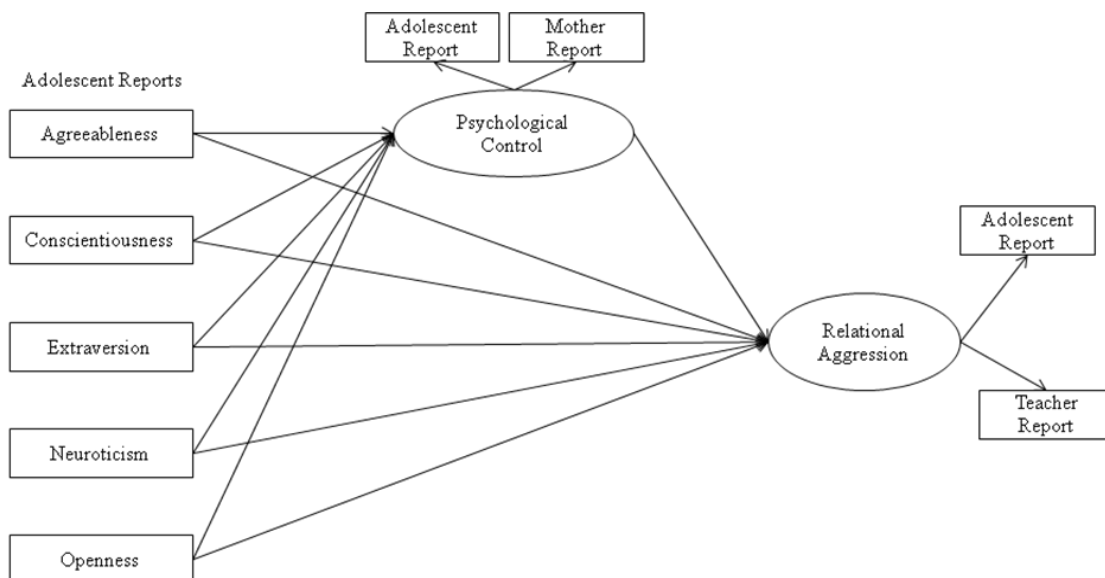
H3. 3. *Adolescents' personality traits have an effect on cyber aggression through their mothers' authoritative and authoritarianism.*



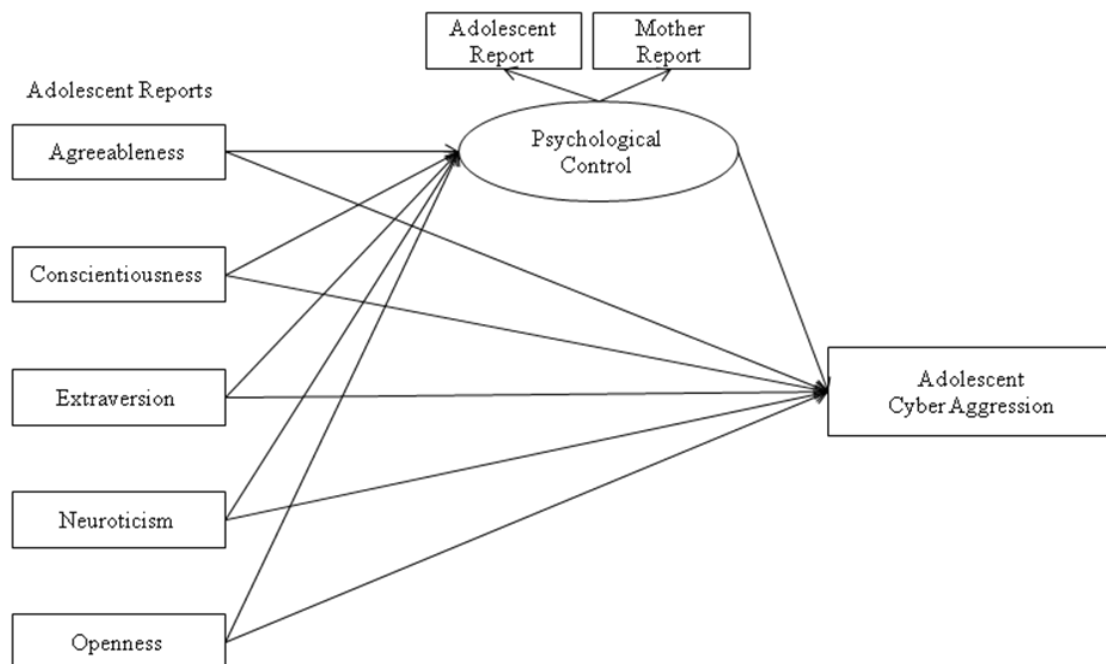
H3. 4. *Adolescents' personality traits have an effect on overt aggression through their mothers' psychological control.*



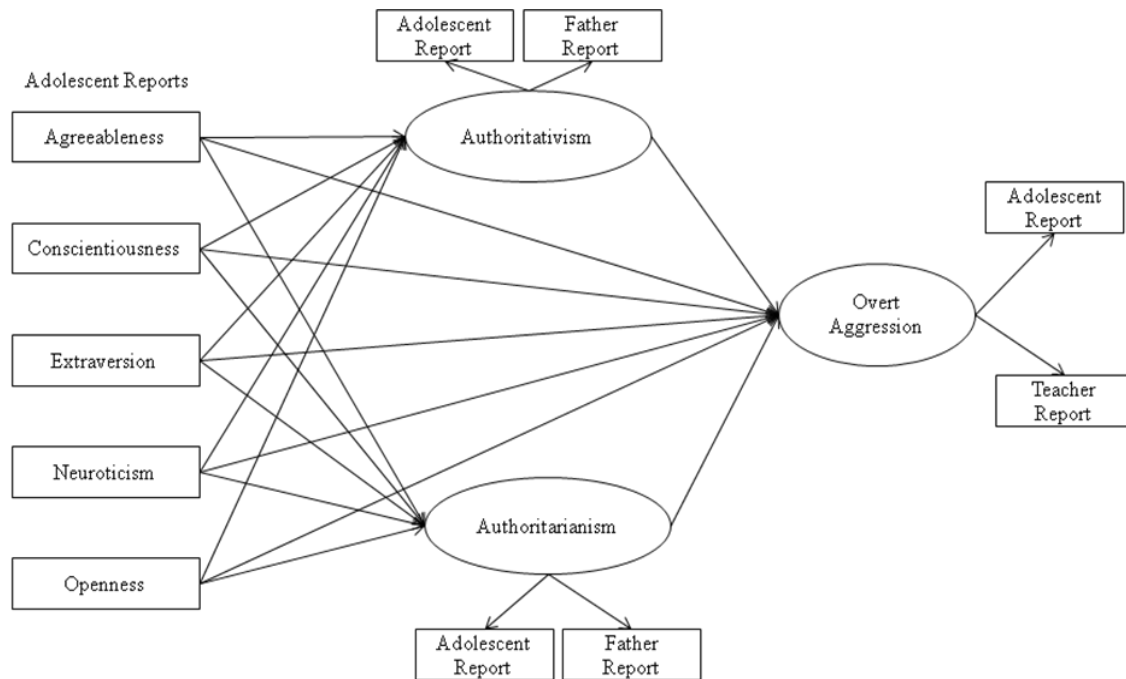
H3. 5. *Adolescents' personality traits have an effect on relational aggression through their mothers' psychological control.*



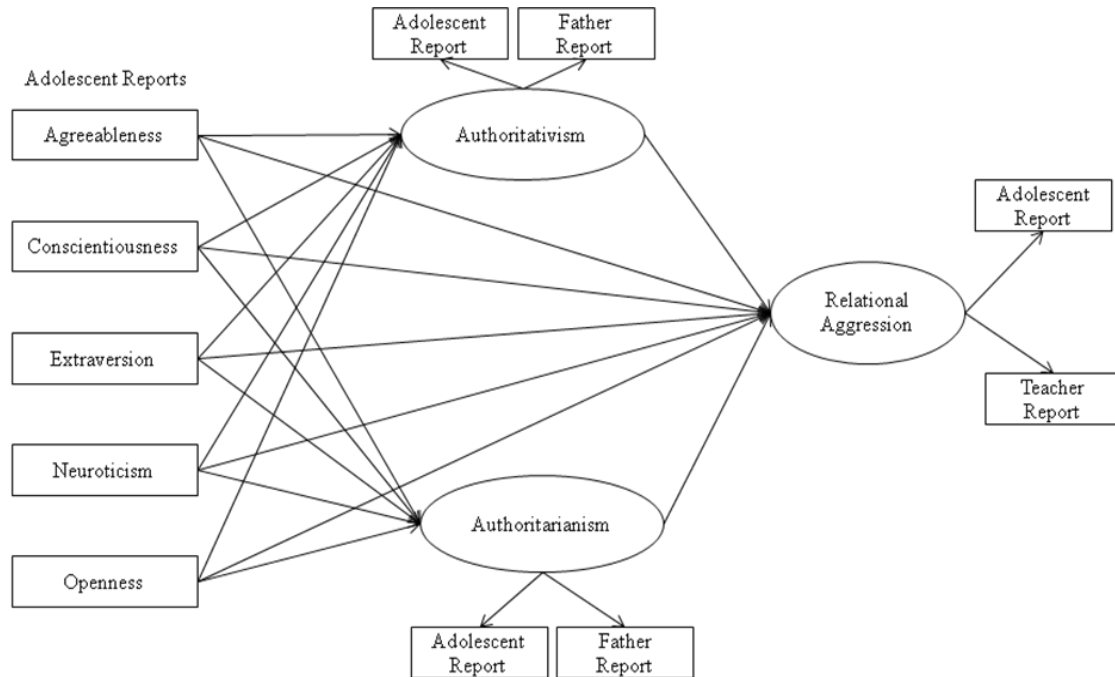
H3. 6. *Adolescents' personality traits have an effect on cyber aggression through their mothers' psychological control.*



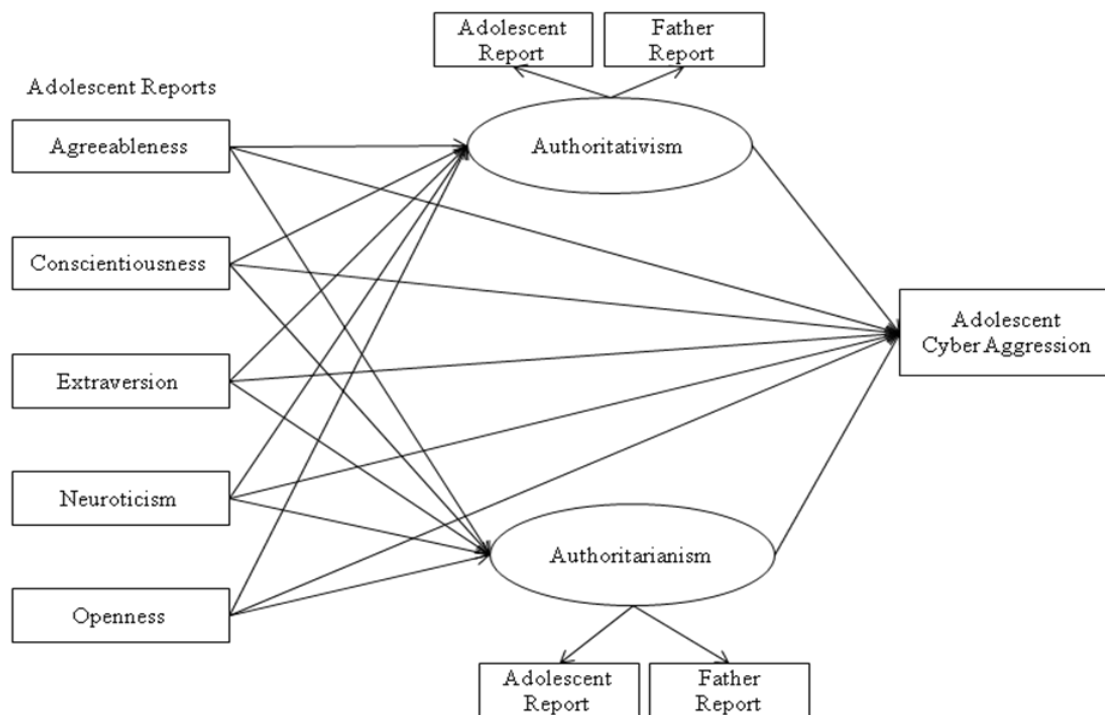
H3. 7. *Adolescents' personality traits have an effect on overt aggression through their fathers' authoritativism and authoritarianism.*



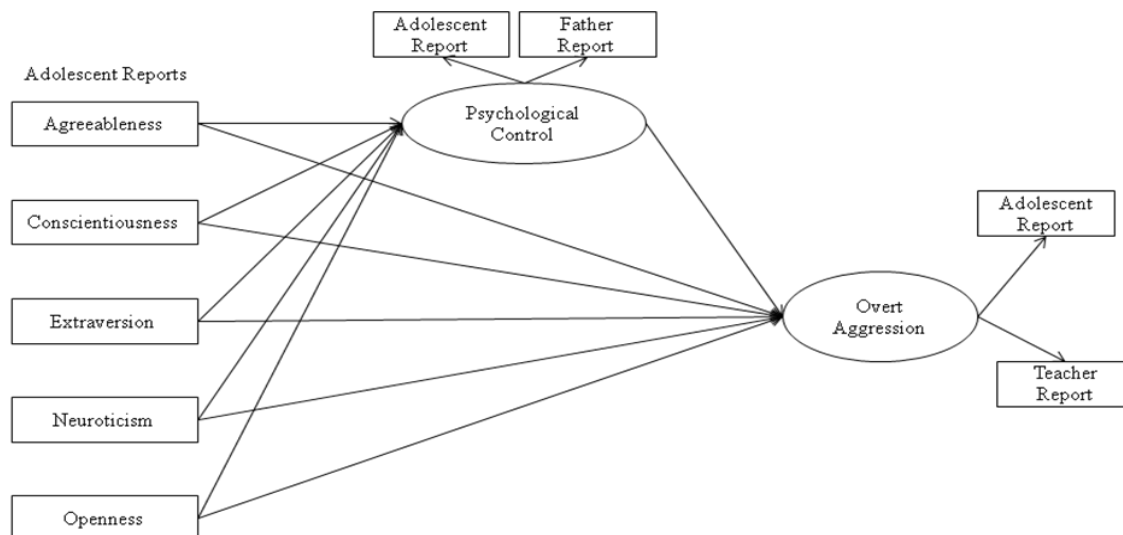
H3. 8. *Adolescents' personality traits have an effect on relational aggression through their fathers' authoritativism and authoritarianism.*



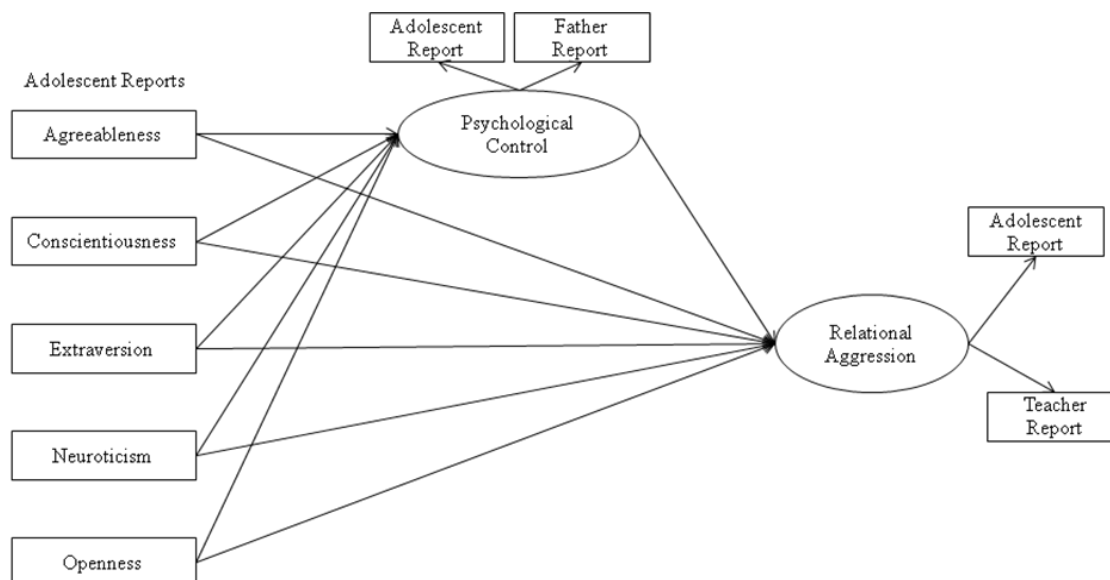
H3. 9. *Adolescents' personality traits have an effect on cyber aggression through their fathers' authoritativism and authoritarianism.*



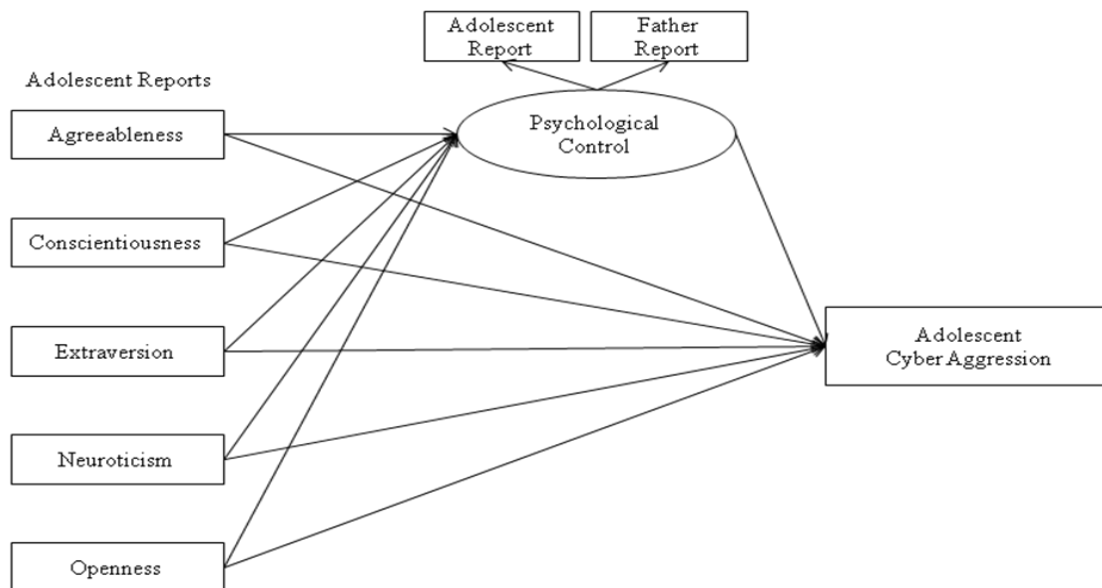
H3. 10. *Adolescents' personality traits have an effect on overt aggression through their fathers' psychological control.*



H3. 11. *Adolescents' personality traits have an effect on relational aggression through their fathers' psychological control.*



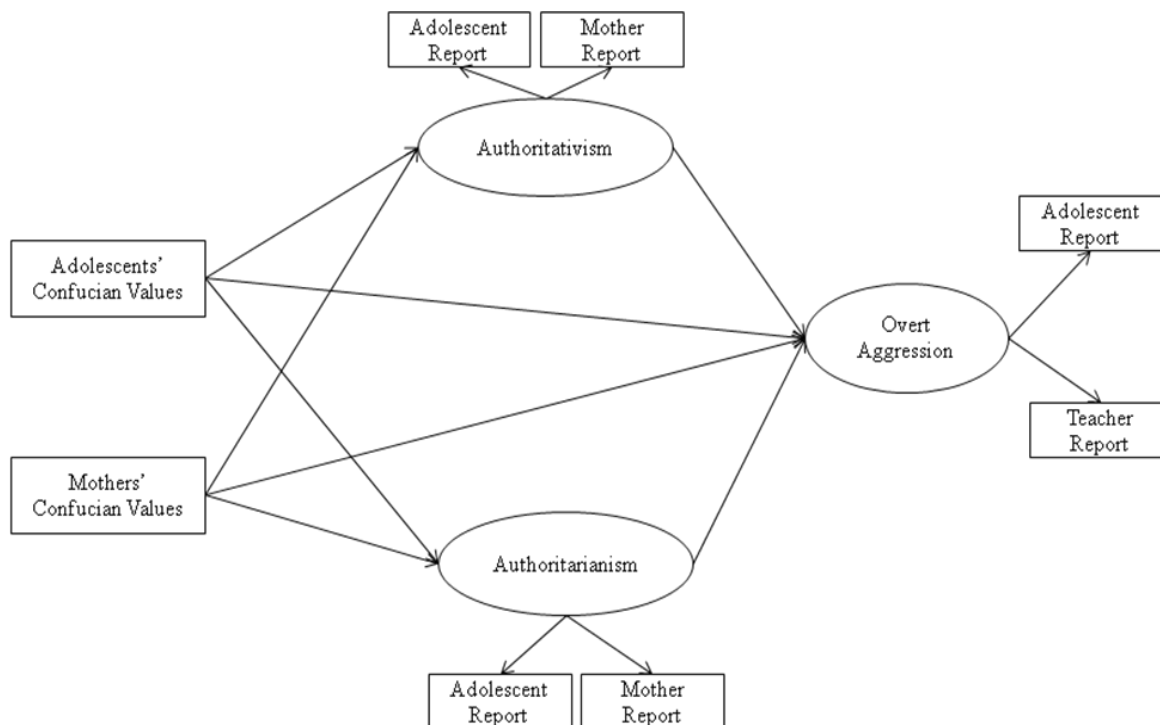
H3. 12. *Adolescents' personality traits have an effect on cyber aggression through their fathers' psychological control.*



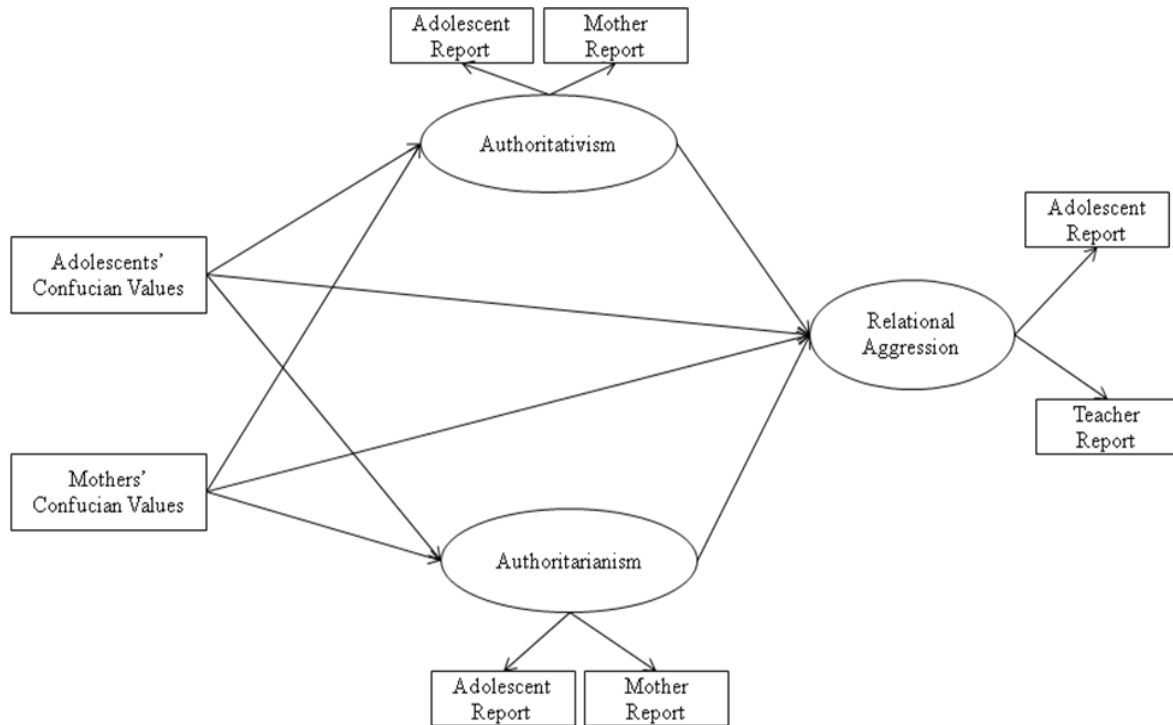
Social learning theory suggests that parenting styles have a significant effect upon the adolescent's aggressive behaviors. Previous research also indicates that an authoritative parenting style is positively related to fewer behavior problems among European American adolescents, and that authoritative and authoritarian parenting styles are related to fewer behavior problems among Asian and Asian-American adolescents. In contrast, authoritarian and permissive parenting styles are related to behavior problems among European American and Asian adolescents (Chen et al., 1997; Lamborn et al., 1991; Pittman & Chase-Lansdale, 2001; Steinberg et al., 1994).

Research question 4. Do Confucian values affect overt, relational, and cyber aggression through parenting typologies and psychological control?

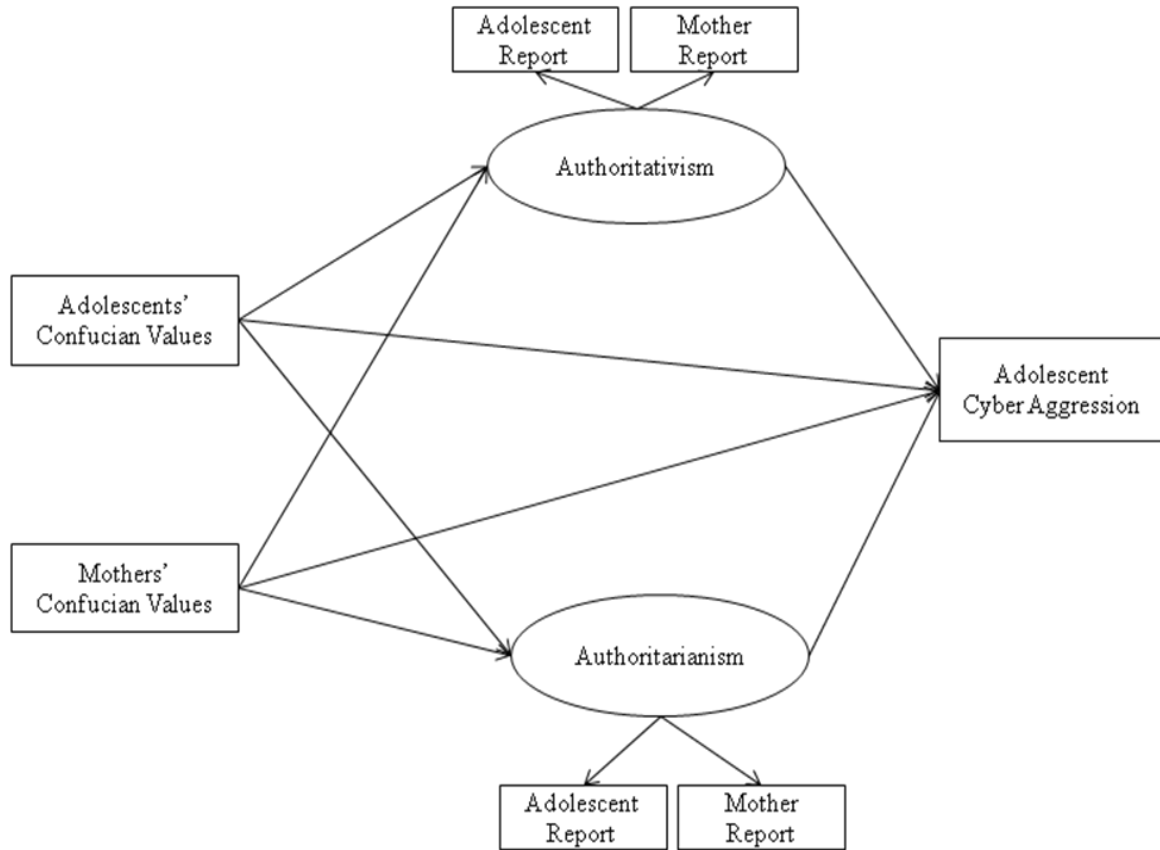
H4. 1. *Both adolescents' and mothers' Confucian values have an effect on adolescents' overt aggression through their mothers' authoritativism and authoritarianism.*



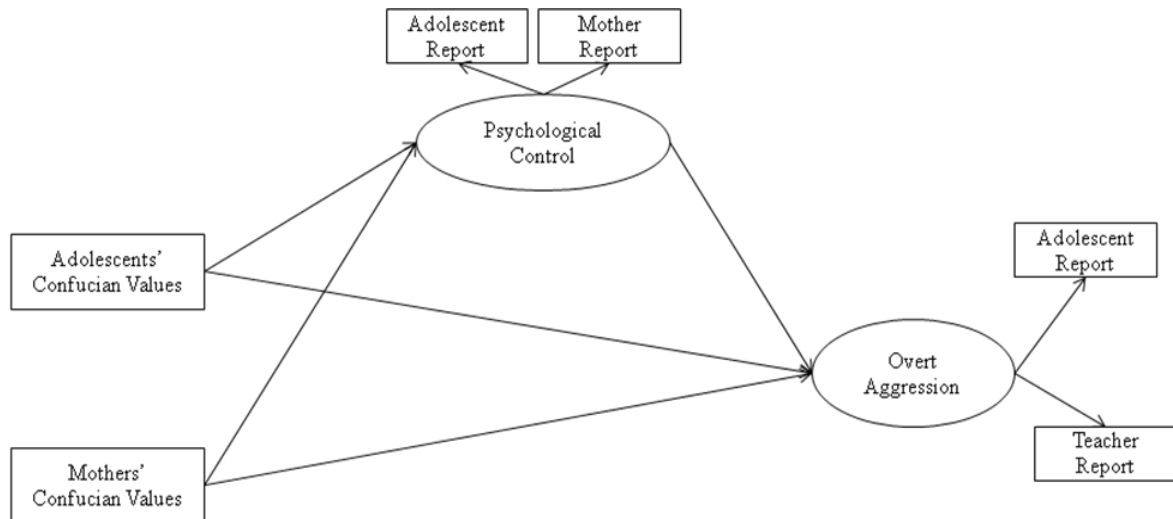
H4. 2. *Both adolescents' and mothers' Confucian values have an effect on adolescents' relational aggression through their mothers' authoritarianism and authoritarianism.*



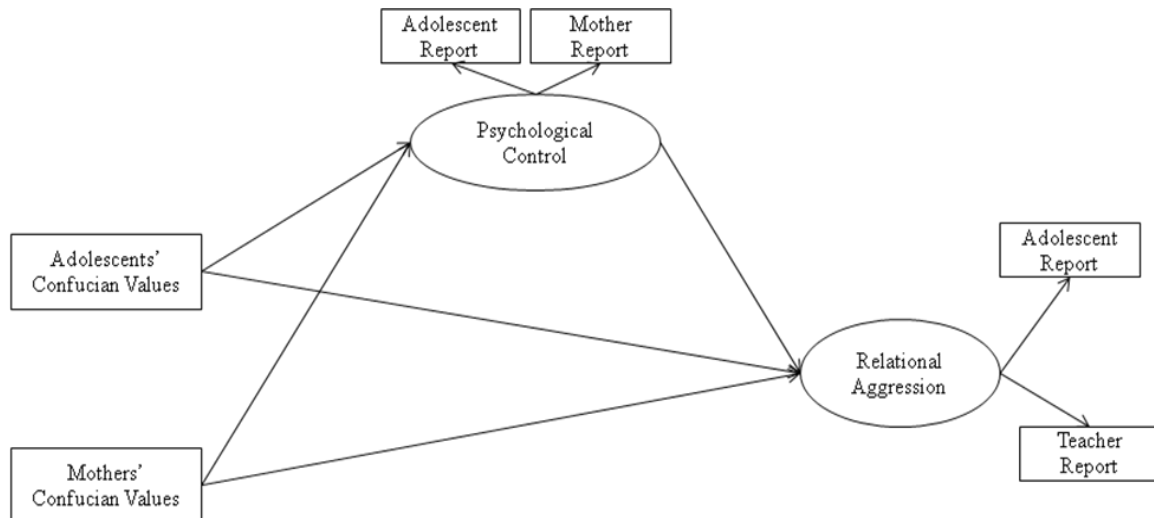
H4. 3. *Both adolescents' and mothers' Confucian values have an effect on adolescents' cyber aggression through their mothers' authoritativism and authoritarianism.*



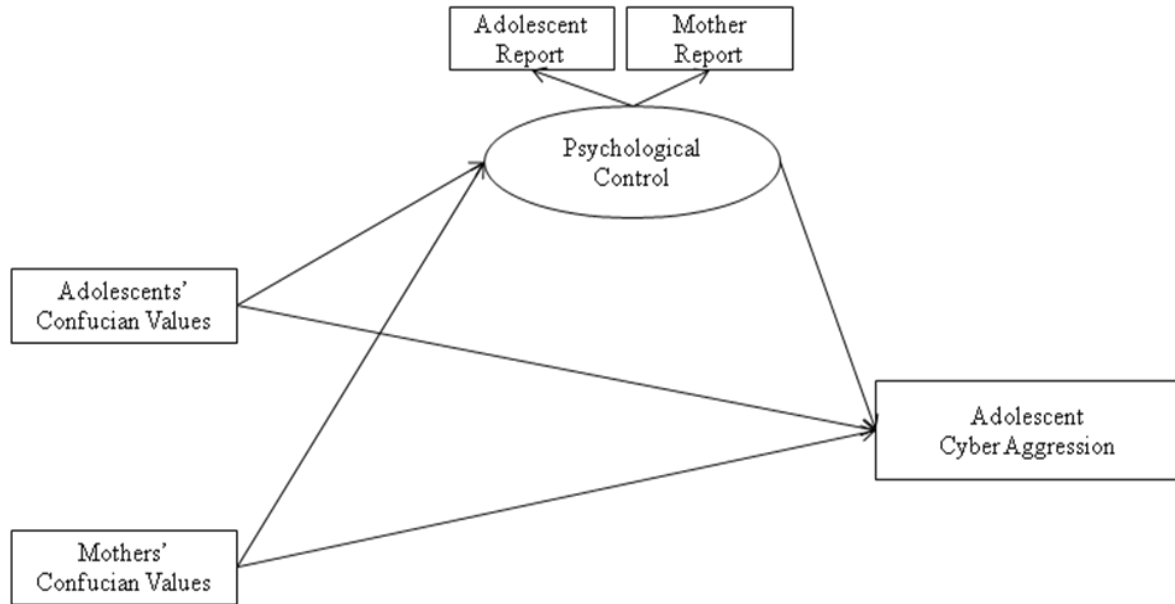
H4. 4. *Both adolescents' and mothers' Confucian values have an effect on adolescents' overt aggression through their mothers' psychological control.*



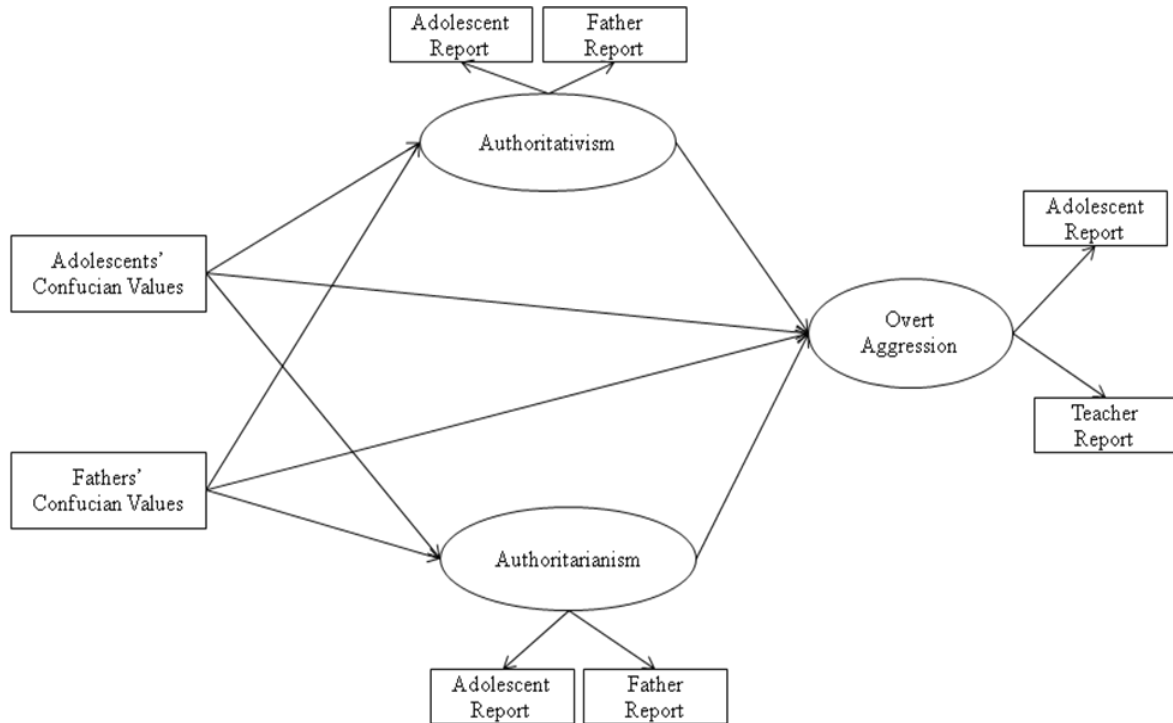
H4. 5. *Both adolescents' and mothers' Confucian values have an effect on adolescents' relational aggression through their mothers' psychological control.*



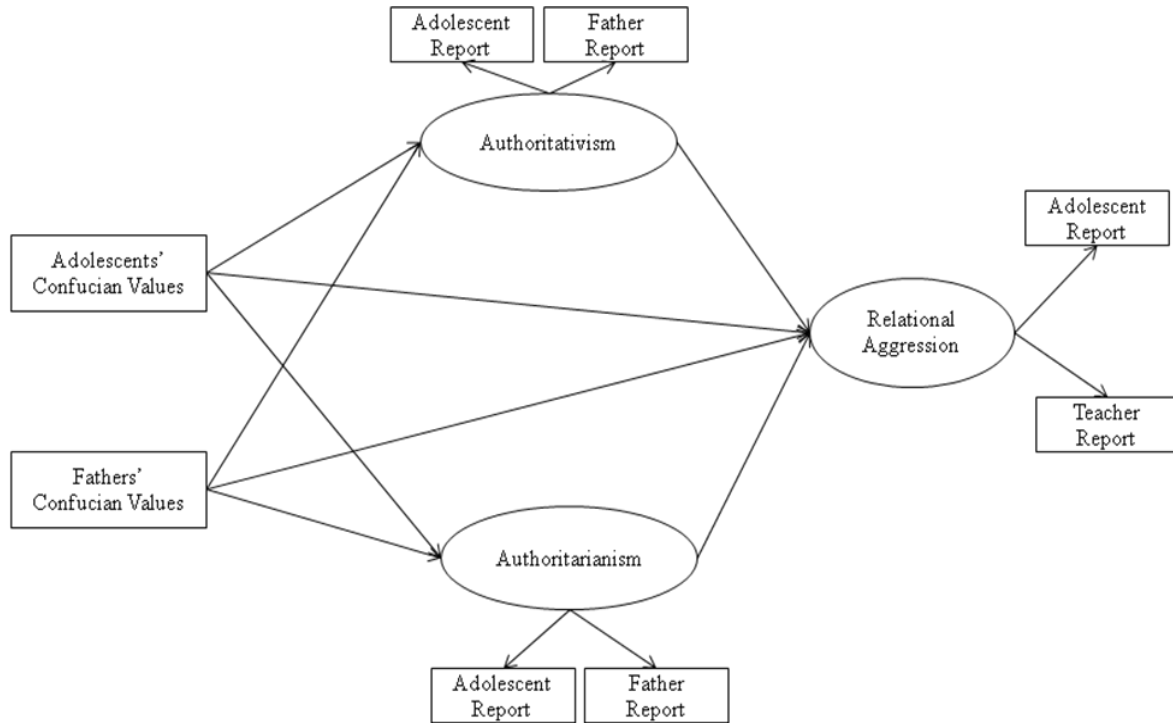
H4. 6. *Both adolescents' and mothers' Confucian values have an effect on adolescents' cyber aggression through their mothers' psychological control.*



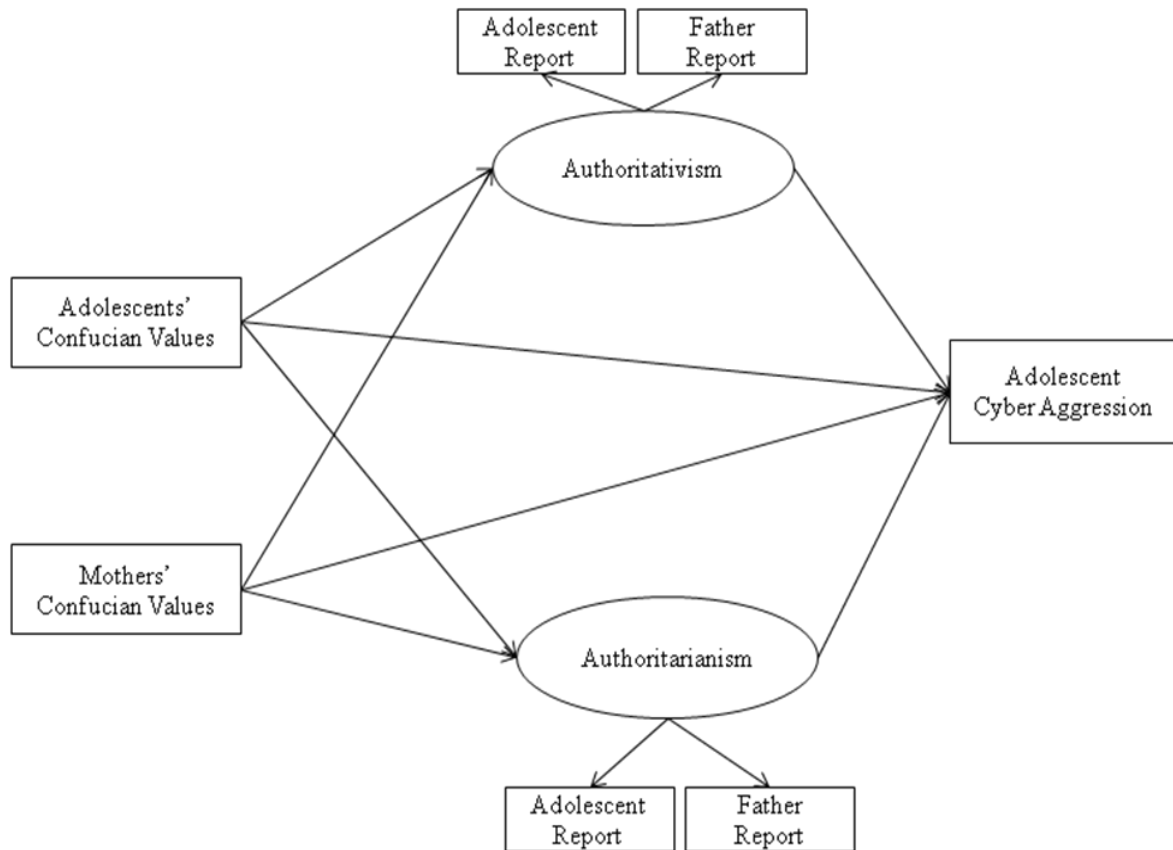
H4. 7. *Both adolescents' and fathers' Confucian values have an effect on adolescents' overt aggression through their fathers' authoritarianism and authoritarianism.*



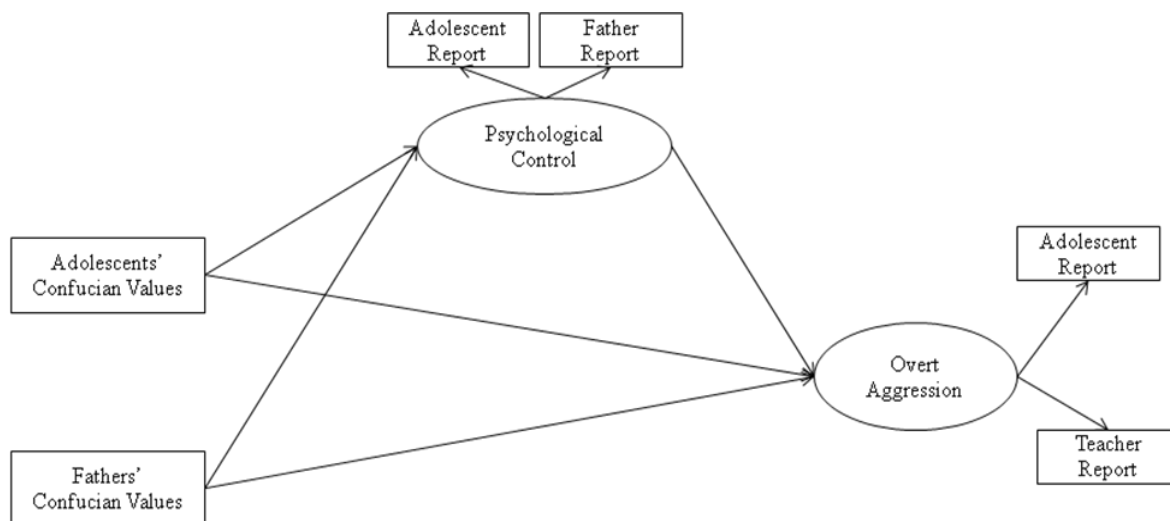
H4. 8. *Both adolescents' and fathers' Confucian values have an effect on adolescents' relational aggression through their fathers' authoritarianism and authoritarianism.*



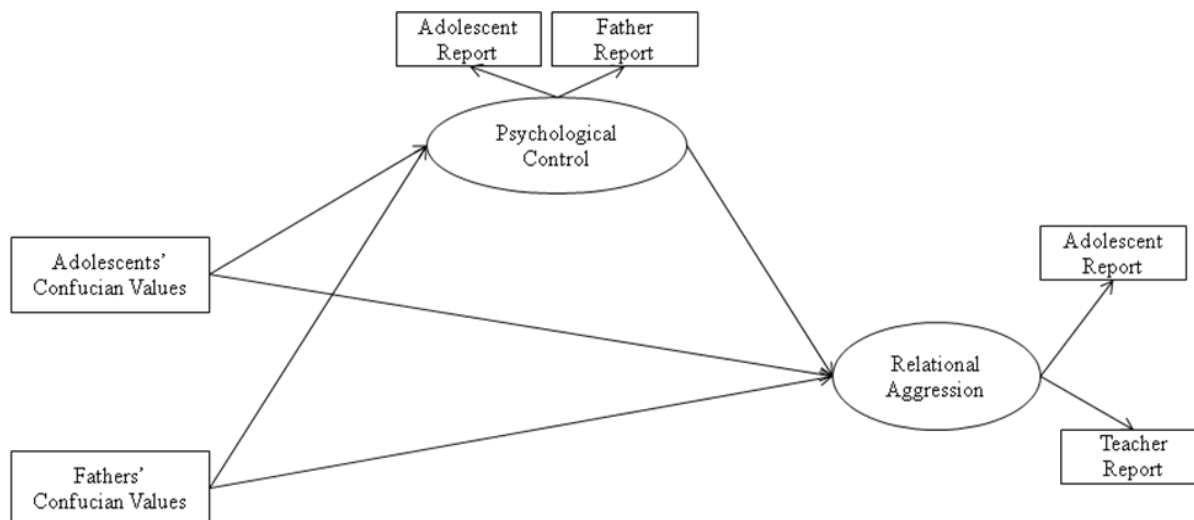
H4. 9. *Both adolescents' and fathers' Confucian values have an effect on adolescents' cyber aggression through their fathers' authoritativism and authoritarianism.*



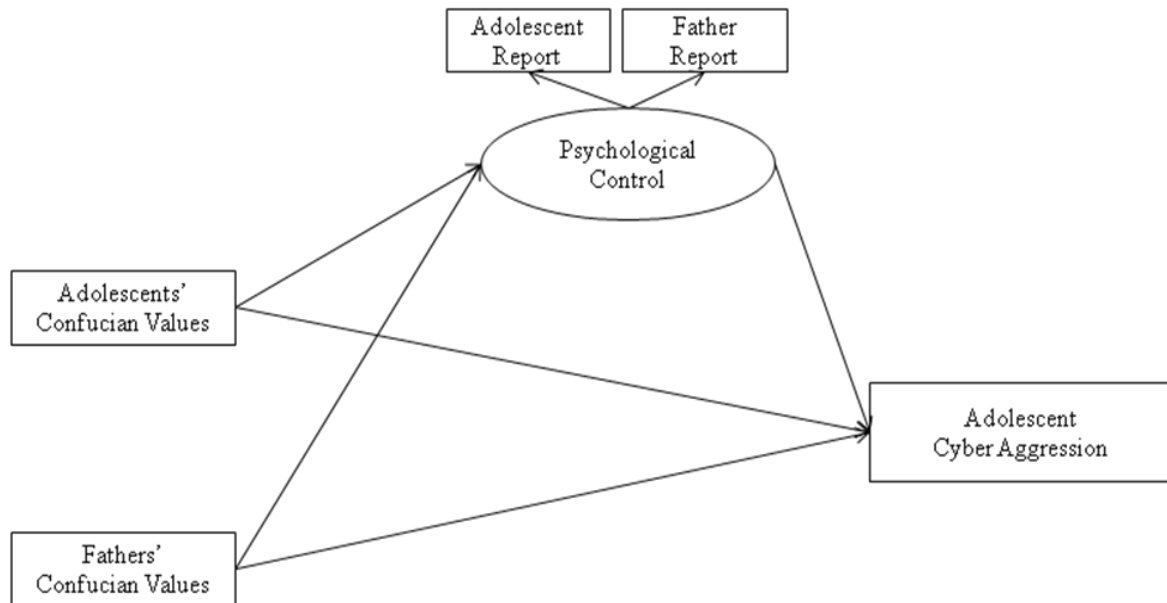
H4. 10. *Both adolescents' and fathers' Confucian values have an effect on adolescents' overt aggression through their fathers' psychological control.*



H4. 11. *Both adolescents' and fathers' Confucian values have an effect on adolescents' relational aggression through their fathers' psychological control.*



H4. 12. *Both adolescents' and fathers' Confucian values have an effect on adolescents' cyber aggression through their fathers' psychological control.*



Conceptualization

The concepts to be examined in this study are Big Five Personality Traits, Confucian values, parenting styles (authoritarian, authoritative, permissive) and psychological control, and overt aggression and relational aggression.

Big Five Personality Traits

A Big Five factor model is considered a useful taxonomy in personality research (Costa & McCrae, 1991; Digman, 1990). The Big Five personality traits are a person's tendency to think, feel, and act (Caspi, 1998; Goldberg, 1990). Personality traits are grouped into five key domains, which include agreeableness, conscientiousness, extraversion, neuroticism (versus emotional stability), and openness to experience (see

Caspi, 1998; Goldberg, 1990).

Agreeableness consists of general characteristics such as altruism, affection, kindness, and prosocial behaviors. Individuals who have a high level of agreeableness are characterized as trustworthy, helpful, cooperative, and sympathetic to others' needs and emotions; those with a low level of agreeableness can be arrogant, competitive, skeptical of others' intentions, and unconcerned about others (Caspi & Shiner, 2006; Costa & McCrae, 1991; Ehrler et al., 1999; Mervielde & De Fruyt, 1999).

Conscientiousness is the ability to resist impulses and temptations. An individual who scores high in conscientiousness is purposeful, thoughtful, determined, reliable, organized, and goal-directed. In contrast, individuals who score lower on conscientiousness tend to be spontaneous, impulsive, unreliable, and careless (Costa & McCrae, 1991; Ehrler et al., 1999; Mervielde & De Fruyt, 1999).

Extraversion is equated with sociability. Individuals high in extraversion are energetic, optimistic, active, and talkative. They enjoy social gatherings. In contrast, individuals who score low in extraversion tend to be quiet, reserved, and independent (Ehrler et al. 1999; Mervielde & De Fruyt, 1999).

Neuroticism is conceptualized as emotional instability, anxiety, embarrassment, irritability, and sadness. Individuals who score high on the neuroticism tend to exhibit fear, anger, and embarrassment. They are inclined to have irrational ideas and cope poorly with stress. In contrast, those who score low in neuroticism tend to be emotionally stable and relaxed (Ehrler et al., 1999; Mervielde & De Fruyt, 1999).

Openness to Experience is defined in terms of active imagination, beliefs, intellectual curiosity, and insight. Individuals high in openness to experience tend to have range of curiosities and interests whereas those who score low in openness to experience tend to be traditional and conventional, preferring the familiar over the novel and usually displaying muted emotional responses (Caspi, & Shiner, 2006; Ehrler et al., 1999; Mervielde & De Fruyt, 1999).

Confucian Values

Confucian values are the attitudes and behaviors based on the ethics that maintain and stress a system of authority and obligation instead of sustaining individual freedom and equality (Bond & Hwang, 1985). A Confucian society emphasizes duty, loyalty, filial piety, respect for age, and sincerity.

Parenting Styles

There are three types of parenting - 3 parenting styles (authoritarianism, authoritativism, permissiveness), and parenting behavior (psychological control). Each has its own consequences for the development of cognitive, social, and behavioral competence. The three parenting typologies (authoritarianism, authoritativism, and permissiveness) are differentiated by the values, behaviors, and standards that parents express toward their adolescent (Dornbusch et al., 1987). Psychological control includes parenting practices that are psychologically intrusive and constrain adolescents' psychological expressions (Barber, 1996; Barber & Harmon, 2002).

Authoritarianism is conceptualized as one of strict discipline, expecting adolescents to

obey without question and evaluating the behaviors and attitudes of their adolescents according to an absolute set of standards. Authoritarian parents do not provide the support or warmth that adolescents need (Baumrind, 1971, 1991).

Authoritativism refers to parents who set expectations of mature and appropriate behavior from their adolescents, impose clear standards and rules for regulating adolescents' behaviors, encourage independence and individuality in their adolescents, have open communications with their adolescents, and provide emotional support (Baumrind, 1971, 1991).

Permissiveness is one in which parents take a tolerant and accepting attitude toward the adolescents desires. Permissive parents use minimal punishment, make few demands for mature behavior, permit a wide degree of self-regulation by adolescents, and avoiding confrontation (Baumrind, 1971, 1991).

Psychological control refers to parental behaviors that are designed to exploit the psychological relationship between the parent and his or her adolescent, and it impedes the development of adolescent's independence and self-worth through constraining, invalidating, and manipulating adolescent's psychological and emotional experience and expression (Barber, 1996; Barber & Harmon, 2002).

Overt, Relational, and Cyber Aggression

Overt aggression is intended to harm another person through physical damage or threat of such damage (Crick, 1997). It includes physically aggressive behaviors (e.g. pushing, hitting) and verbally aggressive behaviors (e.g. threats) which are intended to

inflict harm on another's physical and psychological well-being (Crick & Grotpeter, 1995; Crick et al., 1999).

Relational aggression consists of behaviors that are intended to inflict damage and harm through control of someone else's relationships or feelings. Relational aggression involves purposefully ignoring peers; threatening to withdraw friendship, love, or acceptance; spreading rumors; and gossiping (Crick & Grotpeter, 1995). Relational aggression also includes breaking a peer's confidence and saying mean things about a peer to encourage other peers' rejection of him or her (e.g. telling an adolescent what another adolescent said about him or her) (Crick, 1996).

Cyber aggression is aggressive, intentional, harmful behavior that occurs through a variety of electronics and cyber-spaces- such as mobile phones, e-mails, and websites- to post or send harassing or embarrassing messages to another person (Sontag, Clemans, Graber, & Lyndon, 2011; Ybarra & Mitchell, 2004).

CHAPTER III

Method

Participants

The participants were the seventh- and eighth- graders attending middle schools in the capital city of Seoul, Korea with a population of 10,528,772 in 2011 (Seoul Metropolitan Government, 2012). Seoul is the country's political, cultural, social, and economic hub as well as the center for many South Korean financial and business organizations. The average household income is ₩ 4,142,000 per month (Statistics Korea, 2012). According to Seoul Metropolitan Government (2012), most residents of Seoul are professional and related workers (25.8%) followed by clerks (19.5%), sale workers (13.2%), elementary occupations (11.8%), service workers (11.0%), crafts and related trades workers (9.5%), plant and machine operators and assemblers (6.3%), managers (2.9%), and skilled agricultural, forestry, and fishery workers (0.2%).

There are three reasons to use seventh- and eighth- graders for this study. In developmental stages, middle school is a critical period to face social, familial, and individual changes in the adolescent's life (Santrock, 2011). Adolescents struggle with their sense of identity, build relationships with peer groups, and engage in diverse activities and behaviors. During middle school, identity problems, family experience, and peer impacts have been considered as evidence of reasons for engaging in aggressive and delinquent behavioral problems. In a contextual perspective, an important transition occurs during middle school, and this transition is influenced by one's environment, including family,

school, community, and culture (Santrock, 2011). The school environment is considered an important factor for adolescents because the transition from elementary to middle school leads to stressful conditions, such as more complicated friendships, physical and psychological changes, and greater emphasis on academic performance. Hence, a variety of stresses cause adolescents to become involved in negative behaviors, increasing behavioral problems. Due to pubertal changes, sexuality plays a more important role in gender development for adolescents than for children (Santrock, 2011). Both psychological and behavioral differences between males and females become greater during adolescence because of increased socialization pressures and expectations of gender roles. Males are more physically aggressive and active whereas females show a stronger interest in close peer relationships and have better self-regulation of behavior and emotions (Coie & Dodge, 1998; Crick & Grotpeter, 1995).

In South Korea, education is regarded as highly important and very competitive. A centralized administration oversees the education process of adolescents from kindergarten to high school. Children attend kindergarten for one year, elementary school for six years, middle school for three years, and high school for three years. Generally, middle school students are 14 to 16 years old and the minimum number of school days in middle school is 220 per year. Middle school education is mandatory since 2006 in Korea. The middle school curriculum teaches regular academic subjects (Korean, English, Math, Science, and others) and extra-curricular activities. The general public middle school system of Seoul consists of 268 schools with 248,395 students (131,149 boys and 117,246 girls) in 2011

(Seoul Metropolitan Government, 2012). Students in public middle schools in Seoul are considered relatively homogeneous because they are selected randomly by their districts based on their residence. The study participants were selected from schools that serve students from diverse socioeconomic backgrounds.

Procedure

The process of recruiting adolescents, their parents, and teachers was as follows. First, principals from five middle schools in Seoul were contacted to obtain permission to administer surveys to students and their parents in each school. The principals of these schools received a letter asking for their school's cooperation in conducting a survey at their schools along with informed consent providing a general description of the study, including the purpose, the procedures, as well as the potential risks and benefits to the students. We expect that principals in all five schools agreed to allow the research to be conducted in their middle schools. Once permission was granted, we recruited teachers in the 7th and 8th grades at each school. At each school, five classes in both grade 7th and 8th were randomly selected for this study. These teachers were informing students in their classes about the study, ask for their participation, and distribute the parental and adolescent consent forms to parents and adolescents. These included the description of participants' roles, potential risks to participants, as well as a detailed description of the study. After obtaining the parental consent to participate in the study, students also were asked to provide their consent to participate. With both teachers' and students' consents, surveys were distributed to students who completed the questionnaires after class hours. Students

took home a questionnaire for their parents to complete and returned them in a sealed envelope. These teachers also received a consent form that included their roles and potential risks to participants.

In order to obtain significant statistical power, determining an appropriate sample size for conceptual models is crucial, and sample sizes larger than 200 yield stable results for most studies, which are beneficial for the generalization of research findings (Byrne, 2001; Hoyle, 1995). Therefore, the sampling for this study has been considered carefully, and it would be optimal to collect data from a minimum of 250 families with adolescents, mothers, and fathers.

Since the surveys were administered to Korean adolescents and their parents whose native language is Korean, three Korean graduate students fluent in both Korean and English translated all measurements from English into Korean. To correct any items that had not retained their original meaning, the researcher and three graduate students evaluated the translated questionnaires. To ensure that adolescents and their parents would easily understand the Korean versions of questionnaires, five adolescents and their parents were asked to complete the questionnaires prior to the commencement of the main study and report incomprehensible questions, provide suggestions, and express concerns about the questionnaires with the aim to refine the measurement. Necessary revisions then were made to the adolescent and parent questionnaires.

Measures

Adolescents completed questionnaires assessing their personality traits, Confucian

values, perceived parenting styles, and overt, relational, and cyber aggression. Parents provided information on their parenting styles, Confucian values, and their sociodemographic characteristics, such as their age, education, income, occupation, and marital status.

Big Five Inventory (see Appendix G)

Personality scale was adapted from the Big Five Inventory (John & Srivastava, 1999). The BFI is a 44-item inventory comprising of short phrases that assess five dimensions of personality, agreeableness, conscientiousness, extraversion, emotional stability (neuroticism), and openness to experience (John, Donahue, & Kentle, 1991). The short phrases describe adjective trait of personality and it is believed that short phrases are more precise and descriptive than the single adjectives (John & Srivastava, 1999).

Adolescents were asked to rate the degree to which they agree or disagree with items assessing different personality traits by asking, “I see myself as someone who is. . . .” measured on a 5-point scale ranging from disagree strongly (1) to agree strongly (5).

Agreeableness scale was assessed by nine items. Sample items on the agreeableness scale included, “tends to find fault with others”; “is helpful and unselfish with others”; and “starts quarrels with others.” Conscientiousness scale was assessed by nine items. Sample items on the conscientiousness scale included, “does a thorough job”; “can be somewhat careless”; and “is a reliable worker.” Extraversion scale was assessed by eight items. Sample items on the extraversion scale included, “is talkative”; “is full of energy”; and “generates a lot of enthusiasm.” Neuroticism scale was assessed by eight items. Sample

items on the neuroticism scale included, “is depressed, blue”; “is relaxed, handles stress well”; and “can be tense.” Openness to experience scale was assessed by ten items. Sample items on the openness to experience scale included, “is original, comes up with new ideas”; “is curious about many different things”; and “is ingenious, a deep thinker.”

In prior work (DeYoung, Peterson, Seguin, & Trmblay, 2008; Ehrler et al., 1999; Kang, Kim, Lee, & Kim, 2008) the Big Five personality traits showed good internal consistency. For example, using adolescents, DeYoung and others (2008) reported the Cronbach’s alpha of .75 for agreeableness, .87 for conscientiousness, .80 for extraversion, .82 for neuroticism, and .72 for openness to experience. In another study, using a confirmatory factor analysis, Ehrler and others (1999) reported the Cronbach’s alpha of .72 for agreeableness, .90 for conscientiousness, .78 for extraversion, .70 for neuroticism, and .82 for openness to experience. Likewise, Kang and others (2008) examined Korean adolescents’ personality domains and found that the standardized Cronbach’s coefficients on the Big Five personality were .79 for agreeableness, .77 for conscientiousness, .82 for extraversion, .85 for neuroticism, and .84 for openness to experience. In this study, the reliability analyses using Cronbach’s alpha for the adolescent personality factors were determined by agreeableness = .62, conscientiousness = .74, extraversion = .79, neuroticism = .67, and openness to experience = .80.

Confucian Cultural Values (see Appendix H)

Adolescents and their mothers and fathers were asked to respond to the Chinese Value Survey (CVS) developed by Bond and colleagues (Chinese Culture Connection, 1987). The

CVS assesses the importance of values in Eastern countries and includes four factors:

Integrity and Tolerance (CVS 1), Confucian Ethos (CVS II), Loyalty to Ideals and Humanity (CVS III), and Moderation and Moral Discipline (CVS IV) (Matthews, 2000).

The CVS consists of 40 items: 17 items measuring integrity and tolerance, 11 items measuring Confucian, 9 items measuring humanity, and 3 items measuring moral discipline. They are measured on a 9-point Likert-type scale ranging from of no importance to me (1) to of supreme importance to me (9).

Subscales of the integrity and tolerance scale included “filial piety,” “industry-working hard,” and “humbleness.” Subscales of the Confucian scale included “benevolent authority,” “non-competitiveness,” and “having few desires.” Subscales of the humanity scale included “observation of rites and social rituals” and “reciprocation of greeting, favors.” Subscales of the moral discipline scale included “repayment of good or evil of others” and “sense of cultural superiority.”

In previous work carried out on adolescents the Cronbach’s alphas were .82 for integrity and tolerance, .91 for Confucian ethos, .82 for loyalty to ideals and humanity, and .57 for moderation and moral discipline (Matthews, 2000). In another study with Korean adolescents to conduct a factor analysis, Tamai and Lee (2002) reported that the Cronbach’s alphas were .73 for integrity and tolerance, .67 for Confucian ethos, .66 for loyalty to ideals and humanity, and .56 for moderation and moral discipline. In this study, Cronbach’s alpha of Confucian cultural values for adolescents was .89 for integrity and tolerance and .67 for Confucian ethos. Cronbach’s alpha of Confucian cultural values for

fathers was .89 for integrity and tolerance and .71 for Confucian ethos. Cronbach's alpha of Confucian cultural values for mothers was .89 for integrity and tolerance, and .72 for Confucian ethos.

Parenting Styles and Dimensions Questionnaire (see Appendix I & J)

Adolescents and their mothers and fathers were asked to complete the Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001) that was used to measure Baumrind's (1971) authoritarianism, authoritativism, and permissiveness. The PSDQ was designed to assess theoretically meaningful parenting components that are associated with adolescent behavioral outcomes (Hart, Newell, & Olsen, 2003).

The PSDQ is a shortened version of the original 62-item instrument (Robinson, Mandleco, Olsen, & Hart, 1995). The PSDQ consists of 32 items -15 authoritativism, 12 authoritarianism, and 5 permissiveness - measured on a Likert-type scale ranging from never (1) to always (5). Scores are computed for each of the three parenting dimensions. The authoritativism items include subscales for Warmth and Support, Reasoning/Induction, and Democratic Participation. The authoritarianism items consist of subscales for Verbal Hostility, Physical Coercion, and Nonreasoning/Punitive Strategies. The permissiveness items yield subscales for Indulgence and Failure to Follow Through.

Samples authoritativism items for parent are, "I am responsive to my adolescent's feelings and needs" for warmth and support, "I explain to my adolescent how I feel about the adolescent's good and bad behavior" for reasoning/induction, and "I take my

adolescent's desires into account before asking him/her to do something" for democratic participation.

Samples authoritarianism items for parent are, "I yell or shout when my adolescent misbehaves" for verbal hostility, "I use physical punishment as a way of disciplining my adolescent" for physical coercion, and "I use threats as a punishment with little or no justification" for nonreasoning/punitive strategies.

Samples permissiveness items for parent are, "I state punishments to my adolescent and do not actually do them" and "I give in to my adolescent when the adolescent causes a commotion about something" for indulgence and failure to follow through.

The shortened version of PSDQ has been found to have good psychometric properties (Robinson et al., 2001). Internal consistency as measured by of Sandstrom (2007) indicated .83 for authoritativism, .87 for authoritarianism, and .79 for permissiveness. In another study by Hubbs-Tait and others (2008), they reported the Cronbach's alpha .82 for the authoritativism, .78 for authoritarianism, and .76 for permissiveness (Hubbs-Tait, Kennedy, Page, Topham, & Harrist, 2008). In this study, Cronbach's alpha of the adolescents' reports on their father's parenting style was .86 for authoritarianism and .91 for authoritativism. Cronbach's alpha of the adolescents' reports of their mother's parenting style was .87 for authoritarianism and .91 for authoritativism. Cronbach's alpha for their father's parenting style was .83 for authoritarianism and .90 for authoritativism. Cronbach's alpha for their mother's parenting style was .84 for authoritarianism and .88 for authoritativism .

Psychological Control Scale (see Appendix K & L)

Adolescents and their mothers and fathers were asked to complete the Psychological Control Scale-Youth Self Report (PCSYSR; Barber, 1996). Youth-self reports were used to assess adolescents' perceptions of the extent to which each parent engages in psychologically controlling behaviors. Parent-self reports were used to assess parent-self perceptions of their psychological controlling behaviors. The psychological control scale includes nine items.

Adolescents rated both their mother and father on each item, "my mother/father is always trying to change how I feel or think about things" and "my mother/father will avoid looking at me when I have disappointed him/her." The response format is a five-point scale, ranging from never like him/her (1) to always like him/her (5).

Parents were asked for their self-perceptions of their psychological behaviors. The response format is a five-point scale, ranging from never like me (1) to always like me and responses to items will be averaged. Sample items include, "I am a person who changes the subject, whenever I have something to say" and "I am a person who blames me for other family members' problems."

The Cronbach alphas from the work of Bean and others (2006) using adolescents' report for parental psychological control were .73 for mothers and .76 for fathers (Bean, Barber, & Crane, 2006). In another study by Soenens and others (2007), they used both adolescent reports of parental psychological control and parental reports of their psychological control. The Cronbach's alphas were .82 for adolescents' reports of maternal

psychological control, .75 for adolescents' reports of paternal psychological control, .76 for mothers' reports of psychological control, and .79 for fathers' reports of psychological control. The psychological control scale has sufficient reliability, with a Cronbach's alpha reliability coefficient ranging from .80 to .83 (Barber, 1996). In this study, Cronbach's alpha of the adolescents' reports on their father's psychological control was .87 and their mother's psychological control was .86. Cronbach's alpha for their father's psychological control was .77 and their mother's psychological control was .74.

Aggression (see Appendix M & N)

This study adapted the peer nomination instrument developed by Crick and Grotpeter (1995) and modified it to assess adolescents' overt and relational aggression.

The overt aggression scale consists of five items that assess physical and verbal aggression (Crick, 1997; Crick & Grotpeter, 1995). Relational aggression was assessed using five items that describe purposeful attempts to harm, or threats to harm, other peers' relationships (Crick & Grotpeter, 1995). For overt and relational aggression, each adolescent was asked to reflect on his or her behavior when he or she is angry. Also, teachers of the students were asked to provide the information how his or her students behavior when his or her students are angry at school.

For overt aggression, examples of the items for self-report instrument include, "When you are angry with others, you (1) hit, kick, or punch others and (2) say mean things to others to insult them or put them down." Examples of the items for teacher-report instrument include, "This child pushes and shoves friends."

For relational aggression, examples of the items for self-report and teacher-report include, “When you are angry with others, you (1) try to make others not like a certain person by spreading rumors about them or talking behind their back and (2) get even by keeping a person from being in your group of friends.” Examples of the items for teacher-report instrument include, “This child tries to keep certain people from being in his/her group when it is time to do an activity or play time.”

Cyber aggression was assessed using two items that describe intentional, harmful behavior that occurs through a variety of electronics and cyber-space mediums (e.g., instant messaging, text messaging, and website postings) (Sontag et al., 2011). Examples of the items on the self-report for cyber aggression include, “I directly teased someone in a mean way through email, instant messenger, text messaging or website” and “I say mean things about someone on a website, email, instant messenger, or text messaging so that people would not like him/her” (Sontag et al., 2011). A self-report instrument was used for assessment in this study because only adolescents fully know how they use cyber space and behave in the social mediums with others (Richardson & Green, 1999; Loudin, Loukas, & Robinson, 2003).

Overt and relational aggression instruments have been shown to have high internal consistency, with Cronbach’s alpha ranging from .94 to .97 for overt aggression and .82 to .89 for relational aggression (Crick, 1997; Crick & Grotpeter, 1995). Using a teacher-report aggression measure, Cronbach’s alpha for overt aggression and relational aggression is .94 and .94, respectively (Crick, Casas, & Mosher, 1997). Cyber aggression instruments

showed internal consistencey, with Cronbach's alpha .76 with middles school students in the United States (Patchin & Hinduja, 2010). In this study, Cronbach's alphas for the adolescents' reports on aggression was .59 for overt aggression, .61 for relational aggression, and .54 for cyber aggression. Cronbach's alphas for the teachers' reports on aggression was .58 for overt aggression and .69 for relational aggression.

Data Analysis

The major research question raised in this study addresses the extent to which adolescents' personality traits and Confucian values affect adolescents' overt, relational, and cyber aggression through indirect parenting styles and psychological control. First, preliminary analysis was conducted to identify missing values, potential outliers, non-normal distributions, and other data features (Tabachnick & Fidell, 2007). Data was examined to verify missing data. In order to address data sets with missing data, multiple imputation was utilized. When estimating missing data, the inherent ambiguity is reflected in the unbiased parameter estimates that multiple imputation have been shown to generate. In addition, it provides adequate findings in spite of a low sample size or high rates of missing data (Wayman, 2003). Outliers are identified by testing cases which are inconsistent with the estimates of the other cases. Mahalanobis distance was employed to detect outliers because Tabachnick and Fidell (2007) suggest that outliers are most easily detected through Mahalanobis distance. Normality is an assumption of SEM and implies each variable and all combinations of the variables are normally distributed (Tabachnick & Fidell, 2007). In order to evaluate the normality of distributions, skewness and kurtosis was

tested; Kline (2005) suggests that absolute values of skewness should not be larger than 3.0 and kurtosis should be less than 10.0. The correlation analysis was performed between the adolescent report and the parent report of the same construct to determine the overall pattern of associations among these variables of the same construct.

Second, Exploratory factor analysis was performed to identify a latent structure of observed variables by uncovering common factors that influence the measured variables and reduce the large number of latent variables to a smaller number. It also explore the underlying factor structure of a set of measured variables without imposing any preconceived structure on the outcome (Child, 1990). Principal components analysis was conducted utilizing an oblimin with Kaiser Normalization rotation. Oblique rotation is used when there was evidence showing that the underlying factors are correlated (Mertler & Vannatta, 2005). The results of a scree plot, eigenvalues, total variance, and the conceptual consideration were used to extract the appropriate number of factor components. The primary factor loading was required to above .30, and the minimum eigenvalue of 1.0 was determined for retaining items (Pett, Lackey, & Sullivan, 2003)

To test research questions 1- 4 (and sub hypotheses), a series of theoretical models were tested using AMOS 17.0 (Arbuckle, 2008). The model hypothesized in Figure 1 was tested with structural equation modeling, which examine simultaneous direct and indirect effects of parenting styles (and psychological control) among adolescent personality characteristics, Confucian values, and aggressive behavior.

SEM is a set of statistical techniques combining aspects of factor analysis and multiple

regression, but it is more powerful and sophisticated data analysis by considering the modeling of interactions, correlated independents, and measurement error, it provides information on the degree of fit of the entire model (Byrne, 2001). SEM includes two components, a measurement model and a structural model. The measurement model deals with the relationships between measured variables and latent variables. Measurement models provide validity for the underlying structure of the hypothesized path (Ullman, 2006). After the measurement model is validated, the structural model identifies covariances between the latent variables. These covariances- the degree of linear relationships based on the scale of measurement- illustrate theoretically meaningful correlations among latent constructs.

There are several advantages to using SEM for this study. First, SEM can provide a way to test overall model fit and individual parameter estimate as well as allows for the simultaneous testing of multiple hypotheses (Kline, 2005). Second, SEM enables researchers to identify measurement error in the model estimation process. In the conventional analysis method, researchers cannot distinguish measurement error from a hypothesized relationship among constructs. However, SEM can examine the relationship among theoretical constructs without being affected by measurement errors (Newcomb & Bentler, 1988). Third, SEM analyzes the examination of the causal relationships among observed and latent variables. Finally, SEM allows for an examination of both direct and indirect effects among latent variables. Thus, SEM indicates mediating variables between exogenous latent (independent) variables and endogenous latent (dependent) variables, in

turn, reflecting the hypotheses of this study (Frazier, Tix, & Barron, 2004).

For a method of model estimation, the Maximum Likelihood method (ML) is selected for the proposed model because it is designed to analyze and estimate all paths in the conceptual model to maximize the likelihood based on observed population (Kline, 2005). Indirect and total effects are automatically derived in ML estimation, and it also makes several indexes of overall model fit available (Kline, 2005). Moreover, challenges with analyzing nonnormal multivariate data are addressed by utilizing robust statistics (Bollen & Long, 1993).

Since the analyses of each model begin with a full recursive model, several goodness-of-fit statistics should be evaluated to determine the adequacy of the overall conceptual model (Kline, 2005), such as Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and Chi-Square Index. The GFI indicates the ratio of observed covariances explained by the model. It ranges from 0 to 1 with values over 0.90 indicating a good fit of the data. The AGFI is analogous to a squared multiple correlation adjusted for model complexity. The value of AGFI over .90 indicates adequate fit (Gerbing & Anderson, 1993). CFI is evaluated to determine the incremental fit of the measures and it is recommended that CFI should be equal to or greater than .90, indicating that the given model can reproduce 90% of the covariation in the data (Kline, 2005). The RMSEA assesses how well the data fit the population parameters while accounting for variability in data and the number of participants included in the analyses. The RMSEA statistics are measures of

badness of fit. RMSEA ranges from 0 to 1, with values below 0.05 indicating a good model fit and values below 0.08 indicating a reasonable fit (Kline, 2005). A non-significant chi-square value indicates a good model fit because it indicates that the implied covariance matrix is nearly identical to the observed data. However, the chi-square test is a poor test of model fit because it is affected by sample size, number of variables in a model, the distribution of variables (i.e., multivariate normality assumption), and extraneous variables (Tanaka, 1993). In other words, if the sample size is large, the chi-square value is not likely to be non-significant even though the differences observed and model covariances are small (Kline, 2005).

Modification indices (MI) were used to improve the fit of the model to data. MIs need to be interpreted in relation to critical ratio (CR), which is obtained by dividing the path coefficient with standard error. A critical ratio that exceeds 1.96 ($p = <0.05$) is considered to determine whether a result was statistically significant (Arbuckle & Wothke, 1999).

Tests of Mediation Effects

To determine whether parenting styles (psychological control) mediated the relationship between adolescents' personality domains, Confucian values, and adolescents' aggression, bootstrapping was conducted using methods described by Preacher and Hayes (2008). Bootstrapping was chosen to test mediation in this study because it does not make the assumption of normality on the sampling distribution (Finney, 2006), and it is used to build a sampling distribution for a statistic by resampling from the data (Preacher & Hayes, 2008; Shrout & Bolger, 2002). This method of testing the mediation/indirect effect required

that the effect of the independent variable on the dependent variable is mediated by the proposed mediating variable (Preacher & Hayes, 2008).

Bootstrapping has a higher impact while maintaining reasonable control over the Type 1 error rate (MacKinnon, Lockwood, & Williams, 2004; Williams & MacKinnon, 2008; Preacher & Hayes, 2008). This method was used to overcome the conservative nature of the Sobel Test of mediation and generates an estimate of the indirect effects through empirical sampling distributions by calculating confidence limits (MacKinnon et al., 2004; Preacher & Hayes, 2008). In bootstrapping, significant mediation is determined by a 95% confidence interval. If zero is not in the 95% confidence interval, we can conclude that the indirect effect is significant (Preacher & Hayes, 2008). Thus, bootstrapping was proposed as the statistical method for determining the significance of the indirect effects in the present study.

CHAPTER IV

Results

The purpose of this study was to examine the associations among adolescent personality traits, Confucian values, parenting typologies, and adolescent aggressive outcomes (overt, relational, and cyber aggressive behaviors) within the South Korean context. The research findings are presented in four sections. In the first section, information about missing data, outliers, and normality is presented. In the second section, descriptive statistics of the sample is presented. In the third section, correlation analyses are presented. In the fourth section, the relationship between religious affiliation and Confucianism is presented. In the fifth section, the findings from the factor analyses and reliability of constructs are presented. In the final section, results of the hypothesis testing are presented.

Data Screening

Data screening procedures for missing data, outliers, and normality were undertaken prior to undertaking all statistical analyses. This procedure is recommended prior to conducting Structural Equation Modeling because the use of incomplete data and non normal distribution of data can reduce the power of estimated path models (Arbuckle, 2008).

First, data were examined to identify missing data. Missing data in the survey were less than 2% for each measure. According to Kline (2005) and Tabachnick and Fidell (2007), no imputation methods are necessary when only a few missing scores in a larger

sample, as they do little to disrupt the integrity of the data. Therefore, mean replacement of missing values was chosen as a way to impute missing data.

Outliers were identified after mean replacement. Outlying cases are distinctively different or distant from the estimates of the other cases (Kline, 2005). In this study, analysis to identify outliers was conducted using the test for Mahalanobis distance and the associated p-value. If the p-value was less than .005 cases, these cases were deleted from the analysis (Hair, Black, Babin, Anderson, & Tatham, 2006). After the test for outliers, it was determined that no values were outliers and hence the entire data were retained.

Third, in SEM there is an assumption of normality is important as extreme violations of normality can produce biased results (Ullman, 2006). Univariate normality tests for demographic variables suggested that all variables were normally distributed (variables ranged within -1.5 and +1.5 for both tests). Multivariate normality tests of Skewness and Kurtosis statistics were used to determine whether all observed measures were normally distributed. The majority of the variables in this study revealed absolute values of Skewness less than 3.0 and of Kurtosis less than 10.0, except for the teacher-reported *overt aggression* variable (Skewness = 4.60; Kurtosis = 31.31) and *relational aggression* variable (Skewness = 4.92; Kurtosis = 27.34).

For the present study, it was decided to retain all these variables, as issues of skewness and kurtosis were not a major concern (as is mostly the case with sample sizes above 200) (Tabachnick & Fidel, 2007).

Descriptive Characteristics of Participants

The descriptive statistics for the study are presented in Table 1. Adolescent participants, their parents, and teachers were recruited from 7th and 8th grade among four middle schools in Seoul, Korea. Four hundred sets of surveys were distributed to adolescents, parents and teachers. Participants returned 379 surveys sets (94.75% response rate). Among the 379 survey sets, 18 were excluded from analysis because of the incomplete surveys from both the adolescent respondent and their parents. Thus, the final sample consisted of 361 participants with complete information from adolescents, their parents, and teachers.

The adolescents were between the ages of 13 and 15, and more boys than girls were represented in the sample ($n = 213$, 59%). The average age of adolescents was 13.39 years. Fathers held higher degrees than did mothers; 81 fathers (22.4%) and 130 mothers (36.0%) had a high school degree. One hundred and seventy-nine fathers (49.6%) and 144 mothers (39.9%) had a college degree. Fifty-one fathers (14.1%) and 28 mothers (7.5%) had an advanced college degree.

Fathers were more likely to report a paid occupation than mothers. Regarding fathers' occupations, 99 fathers (27.4%) had clerical work; 89 fathers (24.7%) owned a business; and 65 fathers (18.0%) held professional positions. Regarding mothers' occupations, 188 mothers (52.1%) had an unlisted formal occupation and listed their occupation as home makers. Over 20% of mothers worked professionally - 45 mothers (12.5%) held professional positions, and 37 mothers (10.2%) owned and ran businesses. The median

monthly family income was high (*Median* = 8). Of the total families participating, 192 (53.2%) earned more than 4 million 500 thousand won (\$1US= 1144 won) per month which is considerably higher than the average family income of the total population (3million 8 hundred 40 thousand won per month in 2011, Statistic Korea, 2011). Regarding parental work hours, 263 fathers (72.9%) worked between 40 and 60 hours in a week. The mothers who worked outside the home tended to report a shorter work week: 171 mothers (47.7%) worked less than 20 hours in a week. Families held a range of religious views. Of the total families participating, 94 (26.0%) reported their religion was Christian, 61 (16.9%) were Buddhist, and 147 (40.7%) did not report a religious affiliation.

Table 1. Number and Percentage of Demographic Characteristics of Participants

Education	Fathers <i>N</i> (%)	Mothers <i>N</i> (%)
Less than high school	8(2.2%)	12(3.3%)
Completed high school	81(22.4%)	130(36.0%)
Community college (2 years)	42(11.6%)	48(13.3%)
College (4 years)	179(49.6%)	144(39.9%)
Masters or higher	51(14.1%)	28(7.5%)
Occupation	Fathers <i>N</i> (%)	Mothers <i>N</i> (%)
Service	25(6.9%)	34(9.4%)
Skilled work	36(10.0%)	9(2.5%)
Clerical work	99(27.4%)	34(9.4%)
Professional	65(18.0%)	45(12.5%)
Public official	27(7.5%)	14(3.9%)
Own business	89(24.7%)	37(10.2%)
Unlisted	20(5.5%)	188(52.1%)

Table 1 continued. Number and Percentage of Demographic Characteristics of Participants

Family income (Monthly)		
Less than ₩1,500,000 (about \$1310)		4(1.1%)
₩1,500,000 ~ Less than ₩2,000,000 (about \$1310 ~ \$1747)		5(1.4%)
₩2,000,000 ~ Less than ₩2,500,000 (about \$1747 ~ \$2184)		15(4.2%)
₩2,500,000 ~ Less than ₩3,000,000 (about \$2184 ~ \$2621)		27(7.5%)
₩3,000,000 ~ Less than ₩3,500,000 (about \$2621 ~ \$3058)		32(8.9%)
₩3,500,000 ~ Less than ₩4,000,000 (about \$3058 ~ \$3495)		45(12.5%)
₩4,000,000 ~ Less than ₩4,500,000 (about \$3495 ~ \$3932)		41(11.4%)
More than ₩4,500,000 (about \$3932)		192(53.2%)
Parental work hours	Fathers <i>N</i> (%)	Mothers <i>N</i> (%)
Less than 20 hours	1(0.3%)	171(47.5)
20 hours to less than 40 hours	10(2.9%)	45(12.5%)
40 hours to less than 60 hours	263(72.9%)	121(33.5%)
60 hours to less than 80 hours	75(20.8%)	24(6.6%)
More than 80 hours	11(3.1%)	0(0.0%)
Religion		
Buddhist		61(16.9%)
Catholic		53(14.7%)
Christian		94(26.0%)
Other (please specify)		6(1.7%)
None		147(40.7%)

Table 2. Skewness and Kurtosis of Demographic Variables

	Mean	<i>SD</i>	Skewness	<i>SE</i>	Kurtosis	<i>SE</i>
Adolescent age	13.39	.57	1.19	.13	.43	.25
Education-Father	3.54	1.12	-.20	.13	-.45	.25
Education-Mother	3.16	1.15	.25	.13	-.47	.25
Religion	3.36	1.53	-.22	.13	-1.42	.25
Family income	6.61	1.82	-1.15	.13	.31	.25

Correlations among Constructs

Table 3 present the correlations among the variables used in the analysis. Coefficients below are for boys, and those in bold letters are for girls.

Reports for Fathers. In families with boys, Confucian values were associated positively with authoritativism ($r = .17, p < .05$). Authoritativism was associated negatively with authoritarianism ($r = -.17, p < .05$) and psychological control ($r = -.22, p < .01$). Authoritarianism was associated positively with psychological control ($r = .43, p < .01$). In families with girls, Confucian values were associated positively with authoritativism ($r = .21, p < .15$). Authoritativism was associated negatively with psychological control ($r = -.22, p < .01$). Authoritarianism was associated positively with psychological control ($r = .33, p < .01$).

Reports for Mothers. In families with boys, Confucian values were associated positively with authoritativism ($r = .15, p < .05$). Authoritativism was associated negatively with psychological control ($r = -.32, p < .01$). Authoritarianism was associated positively with psychological control ($r = .35, p < .01$). In families with girls, Confucian values were associated positively with authoritativism ($r = .24, p < .01$) and authoritarianism ($r = .20, p < .05$). Authoritativism was associated negatively with psychological control ($r = -.19, p < .05$).

Table 3. Correlations among Constructs for Boys and Girls (bold letters): Reports for Fathers and for Mothers

Constructs	1	2	3	4
Father				
1. Confucian Values		.21**	.01	.03
2. Authoritativism	.17*		-.12	-.22**
3. Authoritarianism	.10	-.17*		.33**
4. Psychological Control	-.12	-.22**	.43**	
Mother				
1. Confucian Values		.24**	.20*	.00
2. Authoritativism	.15*		-.12	-.19*
3. Authoritarianism	.04	-.11		-.12
4. Psychological Control	-.12	-.32**	.35**	

* $p < .05$. ** $p < .01$.

Relationship between Religious Affiliation and Confucianism

A one-way ANOVA was used to test the relationship between religious affiliation, Buddhist, Catholic, Christian (such as Protestant), other religious groups (such as Won Buddhism, Cheondo gyo), and atheist, and Confucianism.

The finding indicated no statistically significant differences between Confucian values and adolescents' ($F(4, 356) = .30$), fathers' ($F(4, 356) = .80$), and mothers' ($F(4, 356) = .48$) religious affiliation. Post-hoc comparisons using the Tukey test indicated that the mean score for the adolescents' ($M = 6.50$, $SD = 1.05$), fathers' ($M = 6.70$, $SD = .79$), and

mothers' ($M = 6.73$, $SD = .73$) Confucian values did not differ significantly from any other religious group.

Exploration of Factor Analysis and Reliability of Constructs

Exploratory factor analysis was conducted to identify the factor structure of specific constructs. All of the variables were examined individually. Each variable was tested with its equivalent indicator variables to identify items from the scales with significant and appropriate factor loadings. Exploratory factor analysis was conducted separately for adolescents, fathers, mothers, and teachers on items related to adolescent personality traits, adolescent and parental cultural values, parenting styles (psychological control) and adolescent aggressive behavioral problems. The next step was to conduct reliability analysis to ensure the relationships between the variables of each scale were adequately strong, such that the inclusion of the set of variables in a single scale was justified. To measure reliability, Cronbach's alpha was performed on all the scales. Generally, the reliability coefficient is identified as acceptable when Cronbach's alpha is .70 or greater; a good alpha score is .80, and an excellent Cronbach's alpha is .90 or higher (George & Mallery, 2005).

Adolescent Personality Traits. Exploratory factor analysis using principal components was used to identify adolescent personality traits - the number of eigenvalues greater than 1.00 were used as an indicator of the number of factors associated with the construct. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .84 and the Bartlett's Test of Sphericity was significant ($p = .000$). Direct oblimin rotation with Kaiser

Normalization was used to determine the best fit of the variables to each factor, based on their loading. Five factors (agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience) emerged regarding adolescent personality.

The exploratory factor analysis indicated six items for agreeableness (e.g., “I see myself as someone who is considerate and kind to almost everyone” and “Tends to find fault with others”), four items for conscientiousness (e.g., “Does things efficiently” and “Makes plans and follows through with them”), five items for extraversion (e.g., “Tends to be quiet” and “Is talkative”), four items for neuroticism (e.g., “Worries a lot” and “Gets nervous easily”), and seven items for openness to experience (e.g., “Values artistic, aesthetic experiences” and “Is sophisticated in art, music, or literature expected”) (see Appendix O). Eighteen items (e.g., “Is reserved” and “Can be somewhat careless”) were dropped due to weak or double loading. The variance explained by the observed variables for adolescent personality traits was 50.7%.

The initial work on the development and validation of the Big Five factors was conducted in Western samples, and cross-cultural evidence for the existence of the Big Five factors has come from studies with a variety of languages, including Western and Asian languages. Even though the Big Five model is predominant in personality assessment, the model has limitations, and the applicability of the personality measurement to Asian cultures has been questioned (Juni, 1996).

The five factor structure has been replicated in non-western cultures, including South Korea, Japan, China, Malaysia, and The Philippines (McCrae & Costa, 1997; McCrae,

Costa, del Pilar, Rolland, & Parker, 1998; Piedmont & Chae, 1997; Yang et al., 1999). However, in a Chinese sample, Wang, Cui, and Zhou (2005) developed a Big-Seven model, because they found that the Big-Five model could not describe the personality of the Chinese. Research examining Korean undergraduate students' personalities found a six-factor structure for personality traits was present. Those traits included *Agreeableness*, *Conscientiousness*, *Emotionality*, *Extraversion*, *Honesty-Humility*, and *Intellect/Imagination/Unconventionality* (Hahn, Lee, & Ashton, 1999).

In contrast with those studies that have failed to recover all five factors of personality structure (Hahn et al., 1999), a five-factor model of personality has been found applicable for Korean culture by Piedmont and Chae (1997), even though some items related to Agreeableness and Extraversion have shown low factor loading. Filipino, Church, Reyes, Katigbak and Grimm (1997) subjected the data from both college and high school students to factor analysis and found that they provided support for the generality of the Big Five dimensions. Yang (2010) also analyzed personality items using factor analysis and concluded that the five factor model is applicable for use with Chinese samples.

As the previous studies indicated, replication of the Big Five structure in Asian cultures has been inconsistent. Factor analysis for the current study indicates that use of the Big Five factor structure is meaningful for a Korean sample, even though some items did not load to the intended factors.

Adolescent and Parental Confucian Cultural Values. An exploratory factor analysis was conducted to determine adolescents', fathers', and mothers' Confucian cultural values.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .91 for adolescents, .89 for fathers, and .90 for mothers, and the Bartlett's Tests of Sphericity were significant ($p < .001$) for adolescents, fathers, and mothers. Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor based on their loading. The screen plot indicated that a two-factor solution was appropriate for the present study. Items with no loadings greater than .30 and double loadings on the two factors were removed. In the present study, the final solution contained 18 items (see Appendix O). The first factor included 13 items and was labeled integrity and tolerance (e.g., "Industry"; "Sincerity"; and "Trustworthiness"). The second factor contained five items and was called Confucian ethos (e.g., "Being conservative"; "Having few desires"; and "None-competitiveness"). The factors explained 43.8% of the variance for adolescents, 43.8% for fathers, and 43.5% for mothers.

Previous research about Confucian values indicates that there are large variations in terms of the validity of this construct among Asian cultures (Oh, 2005). Zhang and other researchers (2005) used factor analysis techniques to analyze Confucian values and found a three-factor solution indicating interpersonal harmony, relational hierarchy, and traditional conservatism was appropriate with samples in China, Korea, Japan, and Taiwan. In a Korean-only sample, Oh (2005) examined the impact of Confucian values on Korean church leaders' leadership and found four dimensions of cultural valuing that is the same as the original Chinese cultural survey. However, in a subsequent study with just Koreans, Ryu (2007) used a Korean version of a 29-item survey measuring cultural values and found

a two- factor solution. The two factors that emerged were moral cultivation (e.g., “Sincerity”; “Modesty”; and “Education”) and social order (e.g., “Being conservative” and “Respect for tradition”). The similarity of Ryu’s study and this study was that Korean cultural values mainly reflect collective values and emphasize rituals, family, and human relationships. In terms of difference, Ryu’s study showed stronger values of traditional Confucian culture than this study. Hence, two factors of cultural values are useful for Korean families and two factors labeled Integrity and Tolerance, and Confucian Ethos were used to analyze the data for this study.

Parenting Styles. Exploratory factor analysis using principal components was tested to identify the construct of parenting styles using data from adolescent reports and both parent reports.

For the adolescents’ reports of their father’s and mother’s parenting styles, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .92 for fathers and .91 for mothers, and the Bartlett’s Tests of Sphericity were significant ($p = .000$) for both fathers and mothers. Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor, based on their loading.

Two factors (authoritativism and authoritarianism) emerged regarding the adolescents’ reports of their father’s and mother’s parenting styles¹. The factor analysis summary is

¹ Note. Although conceptualized and operationalized as an indicator of parenting style, the five items associated with the permissiveness factor were removed due to weak loadings - *My father/mother finds it difficult to discipline me, My father/mother gives into me when I*

presented in in the Appendix O. The first factor included 15 items that described authoritativism (e.g., “My father/mother shows respect for my opinions by encouraging me to express them” and “My father/mother allows me to give input into family rules”). The second factor contained 12 items that described authoritarianism (e.g., “My father/mother uses threats as punishment with little or no justification” and “My father/mother slaps me when I misbehave”). The variables explained 44.8% of the variance for adolescents’ reports of their father’s parenting styles and 44.7% for their mother’s parenting styles.

For the fathers’ and mothers’ reports on their parenting styles, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .90 for fathers and .90 for mothers, and the Bartlett’s Tests of Sphericity were significant ($p = .000$) for fathers and mothers. Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor, based on their loading. Two factors (authoritativism and authoritarianism) emerged regarding father’s and mother’s parenting styles¹. The factor analysis summary is located in the Appendix O. The first factor included 15 items that described authoritativism (e.g., “I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions” and “I give my child reasons why rules should be obeyed”). The second factor contained 12 items that described authoritarianism (e.g., “I slap my child when the child misbehaves” and “I spank when my child is

cause a commotion about something, My father/mother threatens me with punishment more often than actually giving it, My father/mother states punishments to me and does not actually do them, and My father/mother spoils me.

disobedient”). The observed variables explained 41.2% of the variance for fathers’ parenting styles and 39.5% for mothers’ parenting styles. Therefore, the two factors labeled authoritarian and authoritative parenting were used to analyze the data for this study.

Psychological Control. Principal component factor analyses were used to determine item loadings and factor structure for the adolescents’ reports and parents’ reports on parental psychological control. For the adolescents’ reports, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .90 for fathers and .89 for mothers, and the Bartlett’s Tests of Sphericity were significant for all ($p = .000$). Varimax rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor, based on their loading. The factor analysis summary is located in the Appendix O. The factor included nine items (e.g., “My father (mother) is a person who blames me for other family members’ problems” and “My father (mother) is a person who brings up my past mistakes when he/she criticizes me”), and there are no deleted items for the adolescents’ reports of their father’s and mother’s psychological control. The variables explained 50.8% of the variance for the adolescents’ reports of their father’s psychological control and 48.2% for their mother’s psychological control.

For the fathers’ and mothers’ reports of parental psychological control (see Appendix O), the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .83 for fathers and .83 for mothers, and the Bartlett’s Tests of Sphericity were significant ($p = .000$). Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor based on their loading. The factor included nine items (e.g., “I am a person who

will avoid looking at my child when he/she has disappointed me” and “I am a person who often interrupts my child”), and there are no deleted items for parent-reported parental psychological control. The observed variables explained 38% of the variance for the factor reporting fathers’ psychological control and 37.1% of the variance for the factor reporting mothers’ psychological control.

Aggression. Items assessing aggression were subjected to principal component factor analysis using the adolescents’ reports and the teachers’ reports of adolescent aggressive behavior. The number of factors was determined by the Eigenvalue criterion of greater than 1.00. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .68 for the adolescents’ reports of aggression and .67 for the teachers’ reports of aggression, and the Bartlett’s Tests of Sphericity were significant ($p = .000$). Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor, based on their loading.

The factor analysis summary is located in the Appendix O. For the adolescents’ reports and the teachers’ reports on aggression, a two-factor solution (overt and relational aggression) was adequate for factor analysis. The first factor included four items that described relational aggression (e.g., “Try to keep certain people from being in my group when it is time to do an activity or play time” and “Get even by keeping a person from being in my group of friends”). The second factor contained three items that described overt aggression (e.g., “Hit, kick, or punch others” and “Push and shove others”). Three items (e.g., “Try to make others not like a certain person by spreading rumors about them or talking behind their back”; “Say mean things to others to insult them or put them down”;

and “Call others mean names”) were dropped due to weak or double loading. The observed variables explained 52% of the variance in the adolescents’ reports on aggression and 56.8% in the teachers’ reports of adolescent aggression.

For adolescent cyber aggression, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .50, and the Bartlett’s Tests of Sphericity were significant ($p = .000$). Direct oblimin rotation with Kaiser Normalization was used to determine the best fit of the variables to each factor, based on their loading. The observed variables explained 68% of the variance in the adolescents’ reports on cyber aggression. The factor analysis summary is located in the Appendix O. For this study, two items (e.g., “Directly teased someone in a mean way through email, instant messenger, text messaging or website” and “Say mean things about someone on a website, email, instant messenger, or text messaging so that people would not like him/her”) for cyber aggression were used.

Table 4 represents a summary of the internal consistency of the instruments.

Table 4. Cronbach's Alphas of Constructs

Cronbach's Alpha				
Personality	Adolescent Reports			
Agreeableness	.62			
Conscientiousness	.74			
Extraversion	.79			
Neuroticism	.67			
Openness to experience	.80			
Confucian Cultural Values	Adolescent Reports	Father Reports	Mother Reports	
Integrity & Tolerance	.89	.89	.89	
Confucian Ethos	.67	.71	.72	
Parenting Styles	Adolescent Reports		Father Reports	Mother Reports
	Fathers	Mothers		
Authoritarianism	.86	.87	.83	.84
Authoritativism	.91	.91	.90	.88
Psychological Control	.87	.86	.77	.74
Aggression	Adolescent Reports			Teacher Reports
Overt Aggression	.59			.58
Relational Aggression	.61			.69
Cyber Aggression	.54			

Testing Hypotheses

Structural equation modeling (SEM) was conducted to test the hypothesized model.

The present study proposed four models to explore the relationships among adolescents' personality, Confucian values, parenting typologies, and adolescent aggressive behaviors.

The overall fit of the models was evaluated using SEM procedures. The proposed hypotheses were tested based on the standardized path coefficients depicted in the models. For all the models, non-significant pathways are marked by dotted lines in the figures.

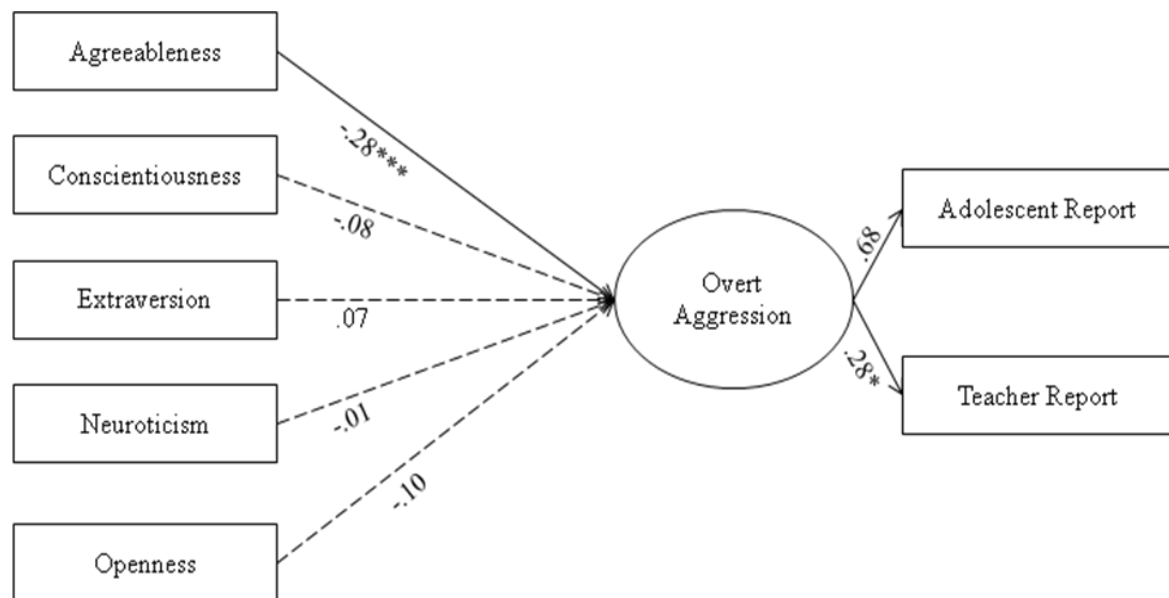
As mentioned earlier in chapter 4, the adequacy of the overall model fitness is evaluated by several measures of goodness-of-fit statistics. Generally, the acceptable range for the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), and the Comparative Fit Index (CFI) suggests that values of .90 or above indicate that the model fits the data well (Byrne, 2001; Kline 2005). The Root Mean Square Error of Approximation (RMSEA) was also used to determine model fit. An RMSEA value below .05 indicates a good model fit; values below .08 indicate a reasonable fit (Kline, 2005).

Research question 1. Are there direct relationships between adolescents' personality traits and overt, relational, and cyber aggression?

H1. 1. *Adolescents' personality traits will be associated with overt aggression.*

The model of the direct effects of the association between adolescents' personality traits and overt aggression indicated a good model fit, $\chi^2(4, N = 361) = 5.4, p = .249$ with GFI = .99, AGFI = .97, CFI = .99, and RMSEA = .03 (see Figure 2).

Figure 2. Direct Effects between Adolescents' Personality Traits and Overt Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

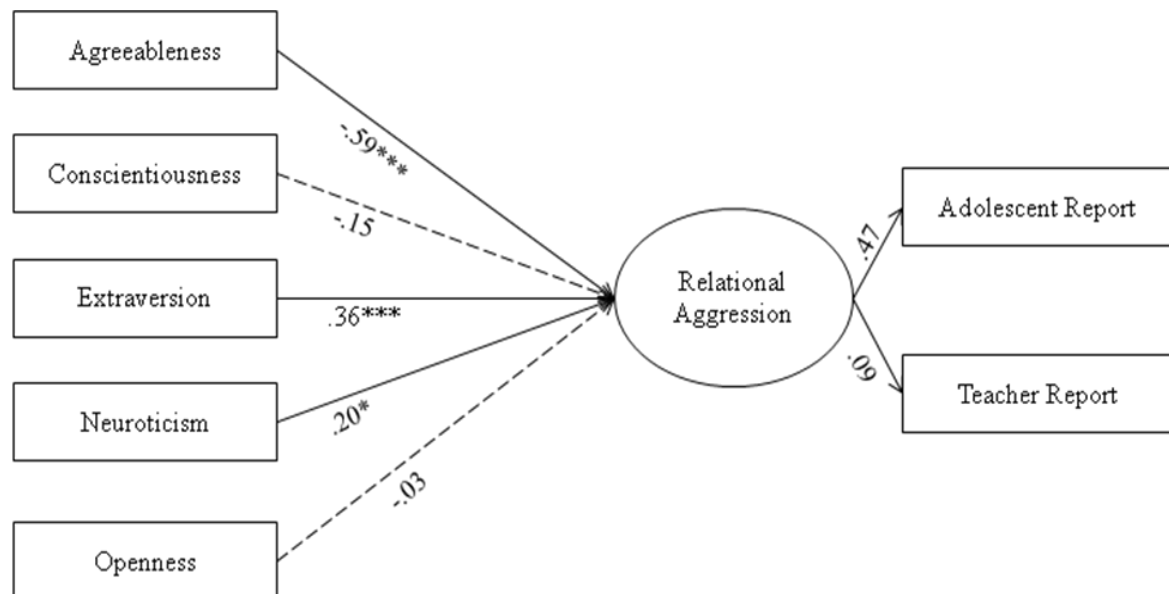
There was a significant negative path from adolescents' agreeableness to their overt aggression ($\beta = -.28, p < .001$). Adolescents who were higher on the agreeableness scale had lower levels of overt aggression. However, the paths from adolescents' conscientiousness to their overt aggression ($\beta = -.08$), adolescents' extraversion to their overt aggression ($\beta = .07$), adolescents' neuroticism to their overt aggression ($\beta = -.01$), and adolescents' openness to their overt aggression ($\beta = -.10$) were not significant.

H1. 2. Adolescents' personality traits will be associated with relational aggression.

The model of the direct effects of the association between adolescents' personality traits and relational aggression indicated a good model fit, $\chi^2(4, N = 361) = 6.1, p = .193$

with GFI = .99, AGFI = .97, CFI = .98, and RMSEA = .04 (see Figure 3).

Figure 3. Direct Effects between Adolescents' Personality Traits and Relational Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

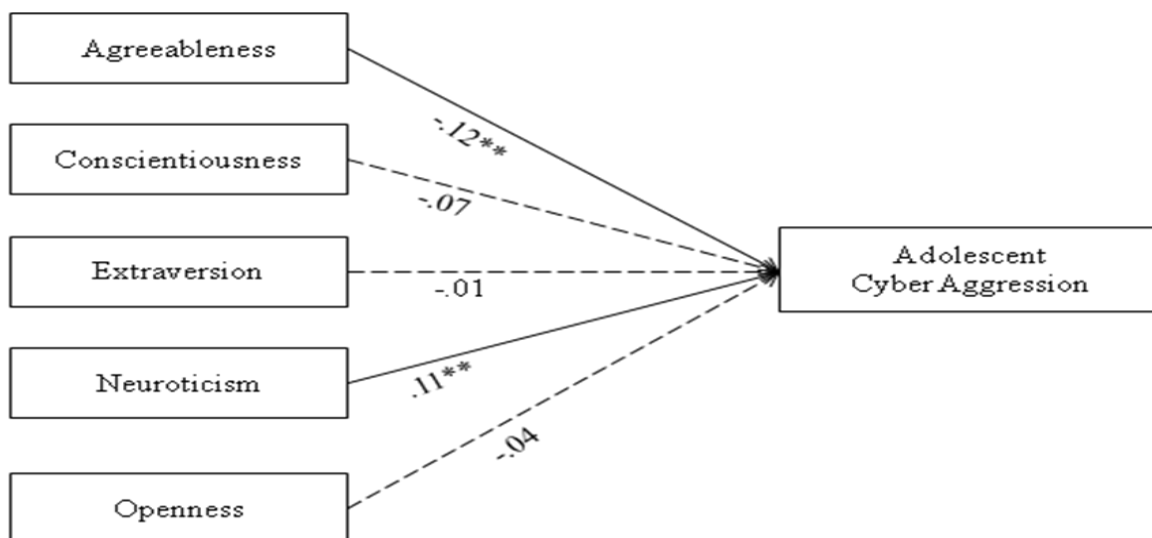
Nonsignificant pathways are marked by dotted lines.

There was a significant negative path from adolescents' agreeableness to their relational aggression ($\beta = -.59, p < .001$). There were significant positive paths from adolescents' extraversion to their relational aggression ($\beta = .36, p < .001$), and adolescents' neuroticism to their relational aggression ($\beta = .20, p < .10$). However, there were no significant relationships between adolescents' conscientiousness and their relational aggression ($\beta = -.15$), and between adolescents' openness and their relational aggression ($\beta = -.03$).

H1. 3. *Adolescents' personality traits will be associated with cyber aggression.*

The model of the direct effects of the association between adolescents' personality traits and cyber aggression indicated a good model fit, $\chi^2(0, N = 361) = .00$ (Should the model fit the data perfectly, the chi-square statistic is zero and no probability level is assigned to the chi-square statistic) with GFI = 1.00, AGFI = 1.00, CFI = 1.00, and RMSEA = .13 (see Figure 4).

Figure 4. Direct Effects between Adolescents' Personality Traits and Cyber Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

There was a significant negative path from adolescents' agreeableness to their cyber aggression ($\beta = -.12, p < .05$). There was a significant positive path from adolescents' neuroticism to their cyber aggression ($\beta = .11, p < .05$). However, there were no significant relationships between adolescents' conscientiousness and their cyber aggression ($\beta = -.07$),

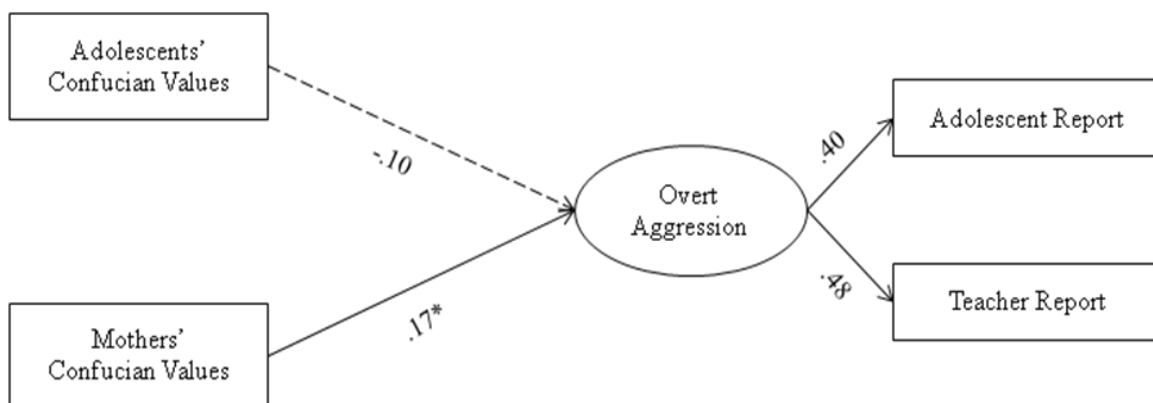
between adolescents' extraversion and their cyber aggression ($\beta = -.01$), and between adolescents' openness and their relational aggression ($\beta = -.04$).

Research question 2. Are there direct relationships between Confucian values and overt, relational, and cyber aggression?

H2. 1. *Adolescents' and mothers' Confucian values will be associated with adolescents' overt aggression.*

The model to the data involving the direct effects of adolescents' and mothers' Confucian values on adolescents' overt aggression had a reasonable model fit: $\chi^2(2, N = 361) = 5.7, p = .058$ with GF I = .99, AGFI = .96, CFI = .85, and RMSEA = .07 (see Figure 5).

Figure 5. Direct Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Overt Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

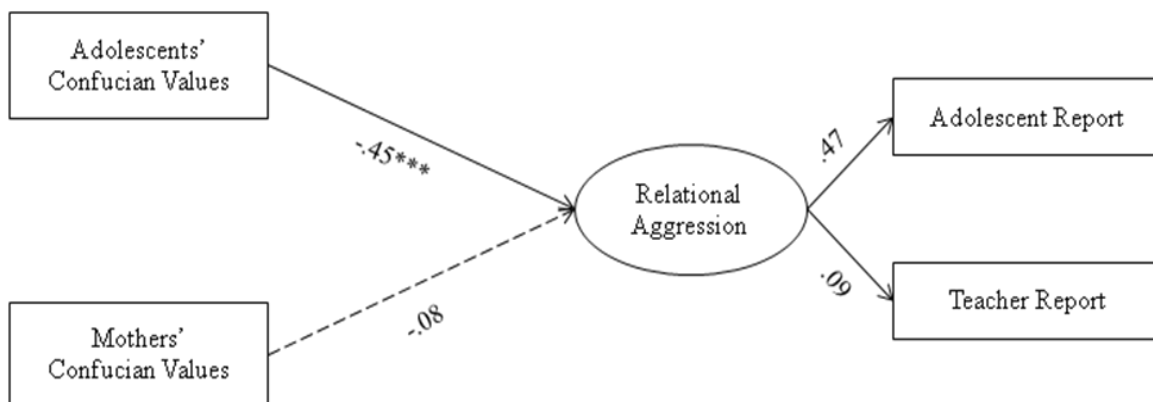
There was a significant positive path from mothers' Confucian values to their adolescents' overt aggression ($\beta = .17, p < .10$). However, there was no association between

adolescents' Confucian values and their overt aggression ($\beta = -.10$).

H2. 2. *Adolescents' and mothers' Confucian values will be associated with adolescents' relational aggression.*

The model to the data involving the direct effects of adolescents' and mothers' Confucian values on adolescents' relational aggression had a good model fit: $\chi^2 (1, N = 361) = .61, p = .435$ with GFI = .99, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 6).

Figure 6. Direct Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Relational Aggression



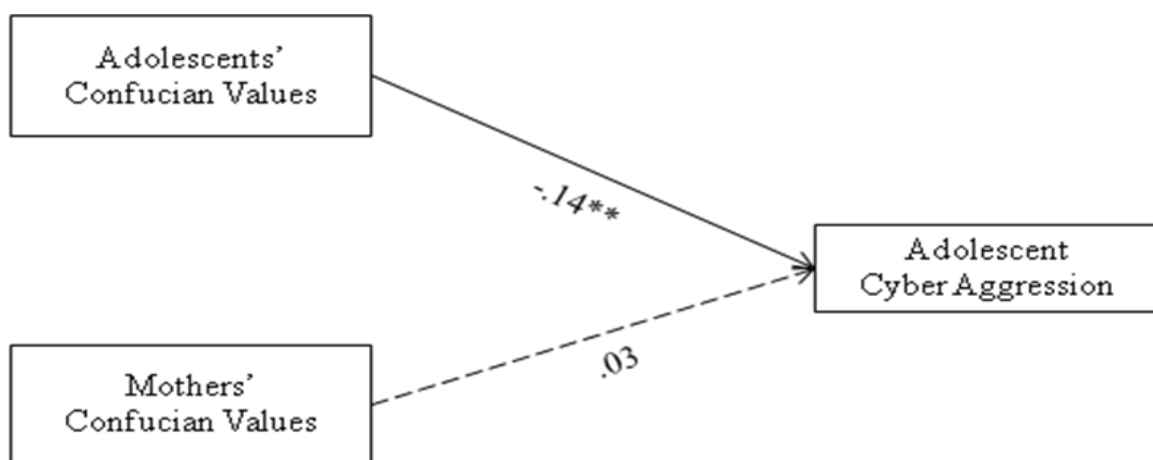
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

There was a significant negative path from adolescents' Confucian values to their relational aggression ($\beta = -.45, p < .001$). However, there was no association between mothers' Confucian values and their adolescents' relational aggression ($\beta = -.08$).

H2. 3. *Adolescents' and mothers' Confucian values will be associated with adolescents' cyber aggression.*

The model to the data involving the direct effects of adolescents' and mothers' Confucian values on adolescents' cyber aggression had a good model fit: $\chi^2 (0, N = 361) = .00$ (Should the model fit the data perfectly, the chi-square statistic is zero and no probability level is assigned to the chi-square statistic) with GFI = 1.00, AGFI = 1.00, CFI = 1.00, and RMSEA = .10 (see Figure 7).

Figure 7. Direct Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Cyber Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

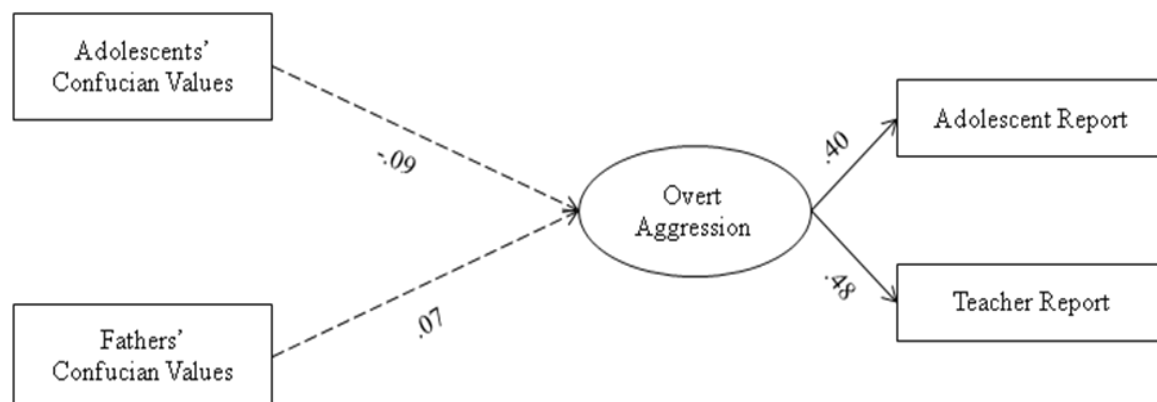
There was a significant negative path from adolescents' Confucian values to their cyber aggression ($\beta = -.14, p < .05$). However, there was no association between mothers' Confucian values and their adolescents' cyber aggression ($\beta = .03$).

H2. 4. *Adolescents' and fathers' Confucian values will be associated with adolescents' overt aggression.*

The model to the data involving the direct effects of adolescents' and fathers'

Confucian values on adolescents' overt aggression had a reasonable model fit: $\chi^2 (2, N = 361) = 5.7, p = .057$ with GFI = .99, AGFI = .96, CFI = .80, and RMSEA = .07 (see Figure 8).

Figure 8. Direct Effects between Adolescents' and Fathers' Confucian Values and Adolescents' Overt Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

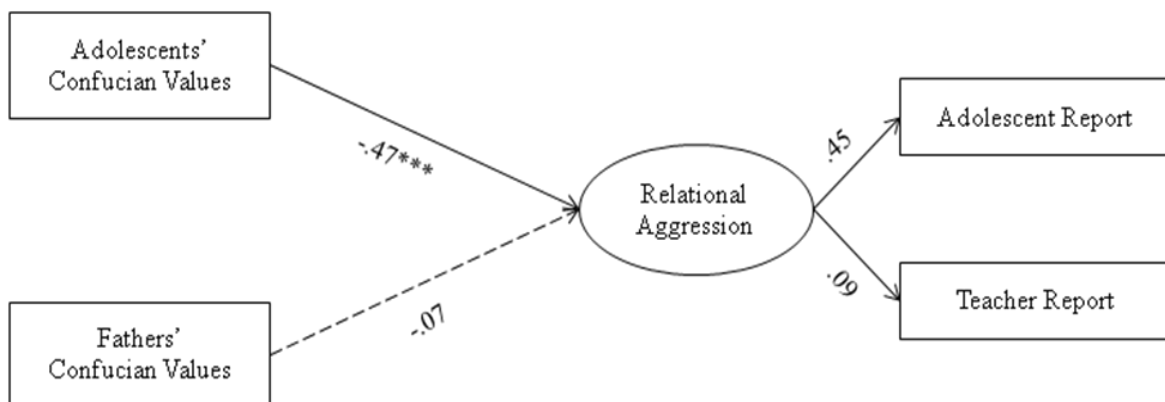
Nonsignificant pathways are marked by dotted lines.

There were no associations between adolescents' Confucian values and their overt aggression ($\beta = -.09$) and fathers' Confucian values and their adolescents' overt aggression ($\beta = .07$).

H2. 5. Adolescents' and fathers' Confucian values will be associated with adolescents' relational aggression.

The model to the data involving the direct effects of adolescents' and fathers' Confucian values on adolescents' relational aggression had a good model fit: $\chi^2 (12, N = 361) = .3, p = .559$ with GFI = 1.00, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 9).

Figure 9. Direct Effects between Adolescents' and Fathers' Confucian Values and Adolescents' Relational Aggression



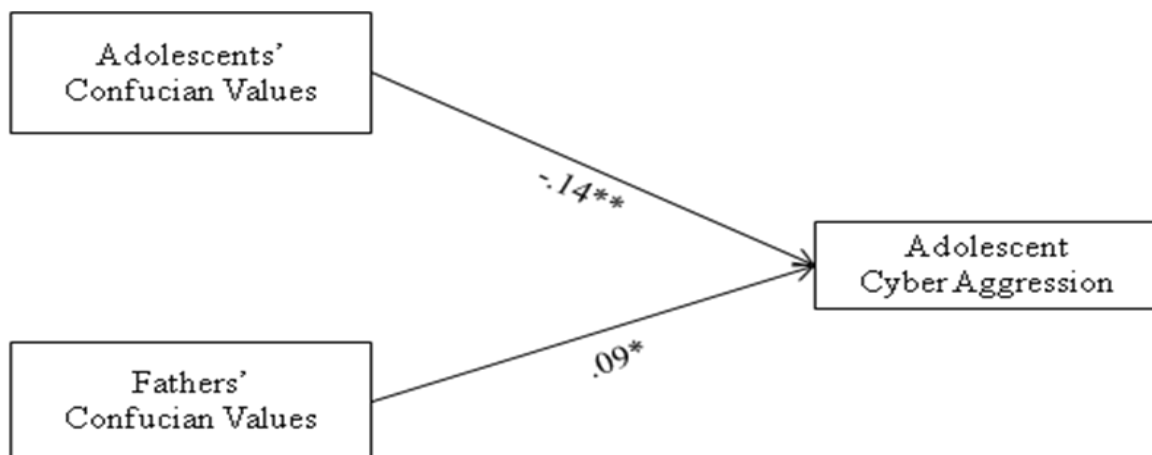
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

There was a significant negative path from adolescents' Confucian values to their relational aggression ($\beta = -.47, p < .001$). However, there was no association between fathers' Confucian values and their adolescents' relational aggression ($\beta = -.07$).

H2. 6. *Adolescents' and fathers' Confucian values will be associated with adolescents' cyber aggression.*

The model to the data involving the direct effects of adolescents' and fathers' Confucian values on adolescents' cyber aggression had a good model fit: $\chi^2 (0, N = 361) = .00$ (Should the model fit the data perfectly, the chi-square statistic is zero and no probability level is assigned to the chi-square statistic) with GFI = 1.00, AGFI = 1.00, CFI = 1.00, and RMSEA = .09 (see Figure 10).

Figure 10. Direct Effects between Adolescents' and Fathers' Confucian Values and Adolescents' Cyber Aggression



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

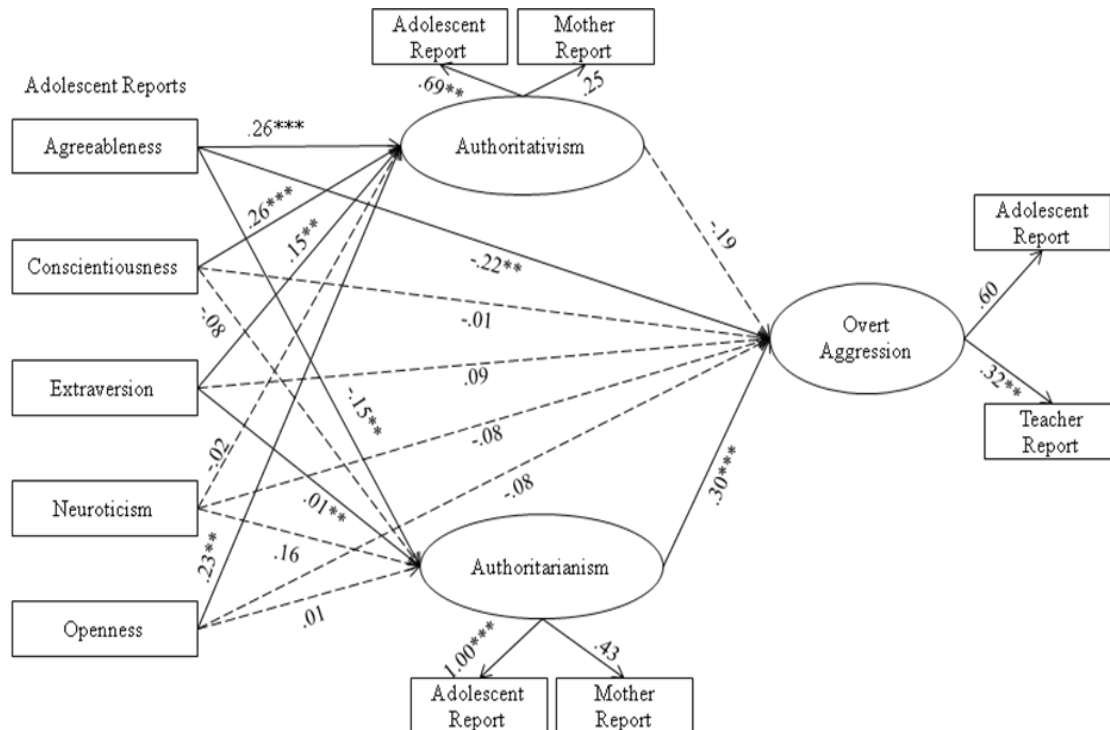
There was a significant negative path from adolescents' Confucian values to their cyber aggression ($\beta = -.14, p < .05$). There was a significant positive path from fathers' Confucian values to their adolescents' cyber aggression ($\beta = .09, p < .10$).

Research question 3. Do adolescents' personality traits affect overt, relational, and cyber aggression through parenting styles and psychological control?

H3. 1. *Adolescents' personality traits have an effect on overt aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the effects of parenting styles between adolescents' personality traits and overt aggression had a good model fit, $\chi^2 (23, N = 361) = 46.2, p = .003$ with GFI = .98, AGFI = .94, CFI = .92, and RMSEA = .05 (see Figure 11).

Figure 11. Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Mothers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Two significant indirect pathways were found:

(a) Adolescents' agreeableness to their mothers' authoritarianism ($\beta = -.15, p < .05$), their mothers' authoritarianism to adolescents' overt aggression ($\beta = .30, p < .001$), and the direct effect between adolescents' agreeableness and their overt aggression ($\beta = -.22, p < .05$) - partial mediation

(b) Adolescents' extraversion to their mothers' authoritarianism ($\beta = .01, p < .05$), their mothers' authoritarianism to adolescents' overt aggression ($\beta = .30, p < .001$) -

complete mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 5.

Table 5. Significance of Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Mothers' Reports of Parenting Styles

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→AUTH→OA	-.042 (-.117/ .068)	-.350/ -.004	
Unstandardized Total Effect	-.112 (-.314/ .045)	Unstandardized Direct Effect AGRE→OA	.057 (.160/ .061)
EXTR→AUTH→OA	.013 (.037/ .035)	-.009/ .108	
Unstandardized Total Effect	.016 (.046/ .035)	Unstandardized Direct Effect EXTR→OA	-.001 (.002/ .149)

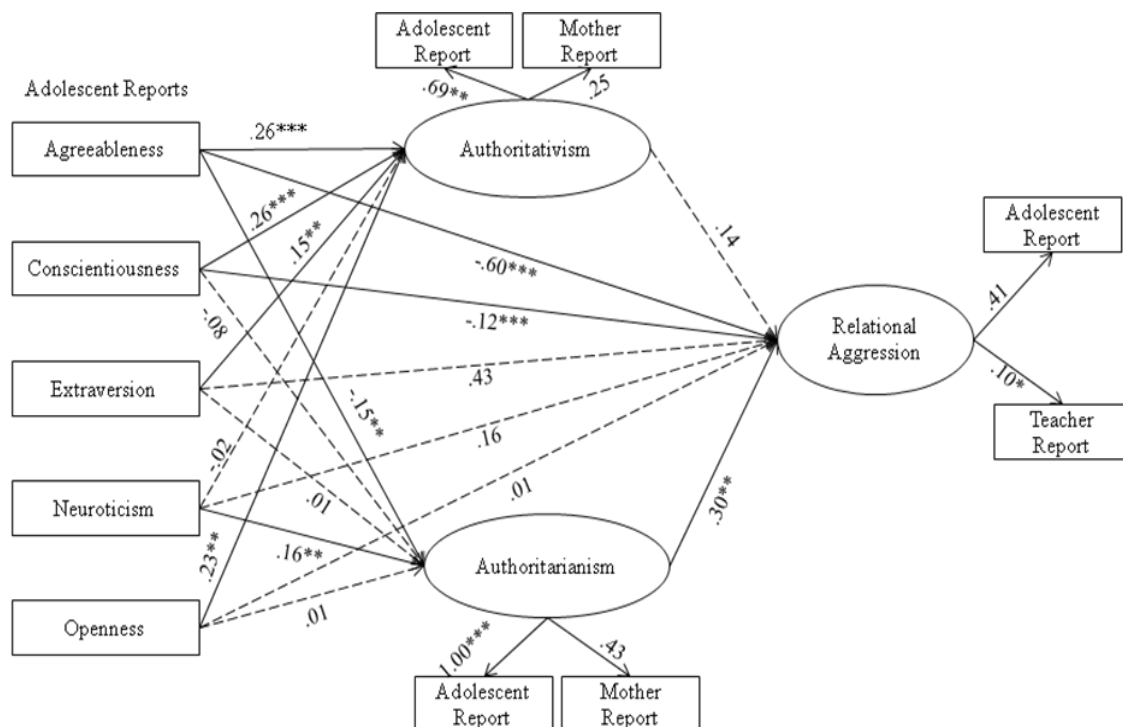
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of the bootstrapping, an indirect pathway from adolescents' agreeableness to overt aggression through mothers' authoritarianism was significant.

H3. 2. *Adolescents' personality traits have an effect on relational aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the effects of parenting styles between adolescents' personality traits and relational aggression had a good model fit, $\chi^2 (23, N = 361) = 47.2, p = .000$ with GFI = .98, AGFI = .93, CFI = .92, and RMSEA = .05 (see Figure 12).

Figure 12. Indirect Effects between Adolescents' Personality Traits and Relational Aggression through Adolescents' and Mothers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Two significant indirect pathways were found:

(a) Adolescents' agreeableness to their mothers' authoritarianism ($\beta = -.15, p < .05$), their mothers' authoritarianism to adolescents' relational aggression ($\beta = .30, p < .05$), and the direct effect between adolescents' agreeableness and their relational aggression ($\beta = -.60, p < .001$) - partial mediation

(b) Adolescents' neuroticism to their mothers' authoritarianism ($\beta = .16, p < .05$), their mothers' authoritarianism to adolescents' relational aggression ($\beta = .30, p < .05$) - complete

mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 6.

Table 6. Significance of Indirect Effects between Adolescents' Personality Traits and Relational Aggression through Adolescents' and Mothers' Reports of Parenting Styles

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→AUTH→RA	-.016 (-.044/.084)	-.099/ .145	
Unstandardized Total Effect	-.242 (-.698/ .043)	Unstandardized Indirect Effect AGRE→RA	-.210(.607/ .072)
NEUR→AUTH→RA	.006 (.019/.053)	-.053/ .082	
Unstandardized Total Effect	.074 (.214/ .053)	Unstandardized Indirect Effect NEUR→RA	.063 (.181/ .074)

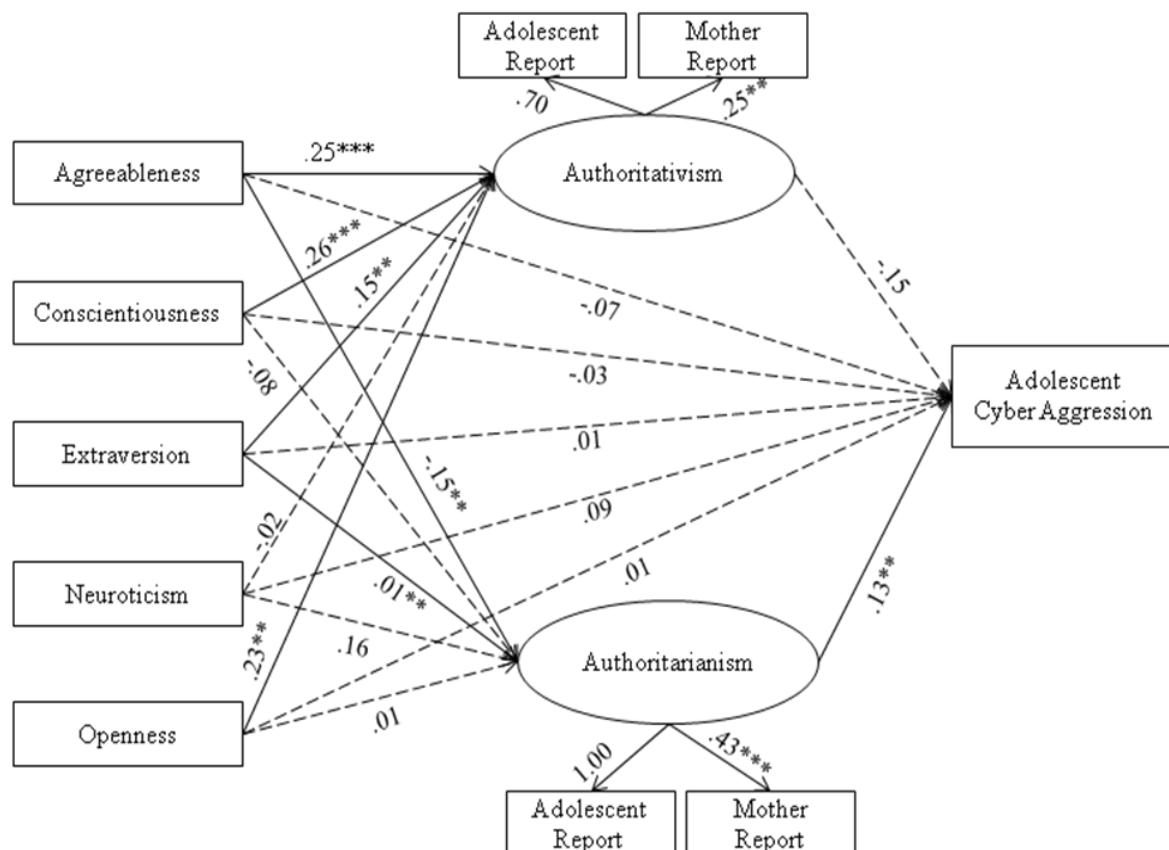
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of the bootstrapping, none of the indirect pathways were found to be significant.

H3. 3. *Adolescents' personality traits have an effect on cyber aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the effects of parenting styles between adolescents' personality traits and cyber aggression had a good model fit, $\chi^2 (15, N = 361) = 33.1, p = .005$ with GFI = .98, AGFI = .94, CFI = .93, and RMSEA = .06 (see Figure 13).

Figure 13. Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Mothers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Two significant indirect pathways were found:

(a) Adolescents' agreeableness to their mothers' authoritarianism ($\beta = -.15, p < .05$), their mothers' authoritarianism to adolescents' cyber aggression ($\beta = .13, p < .05$) - complete mediation

(b) Adolescents' extraversion to their mothers' authoritarianism ($\beta = .01, p < .05$),

their mothers' authoritarianism to adolescents' cyber aggression ($\beta = .13, p < .05$) -

complete mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 7.

Table 7. Significance of Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Mothers' Reports of Parenting Styles

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→AUTH→CA	-.019 (-.031/ .061)	-.130/ .054	
Unstandardized Total Effect	-.079 (-.122/ .035)	Unstandardized Direct Effect AGRE→CA	-.047 (-.073/ .058)
EXTR→AUTH→CA	.006 (.010/.030)	-.012/ .087	
Unstandardized Total Effect	-.009 (-.014/ .036)	Unstandardized Direct Effect EXTR→CA	-.007 (.011/ .116)

Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

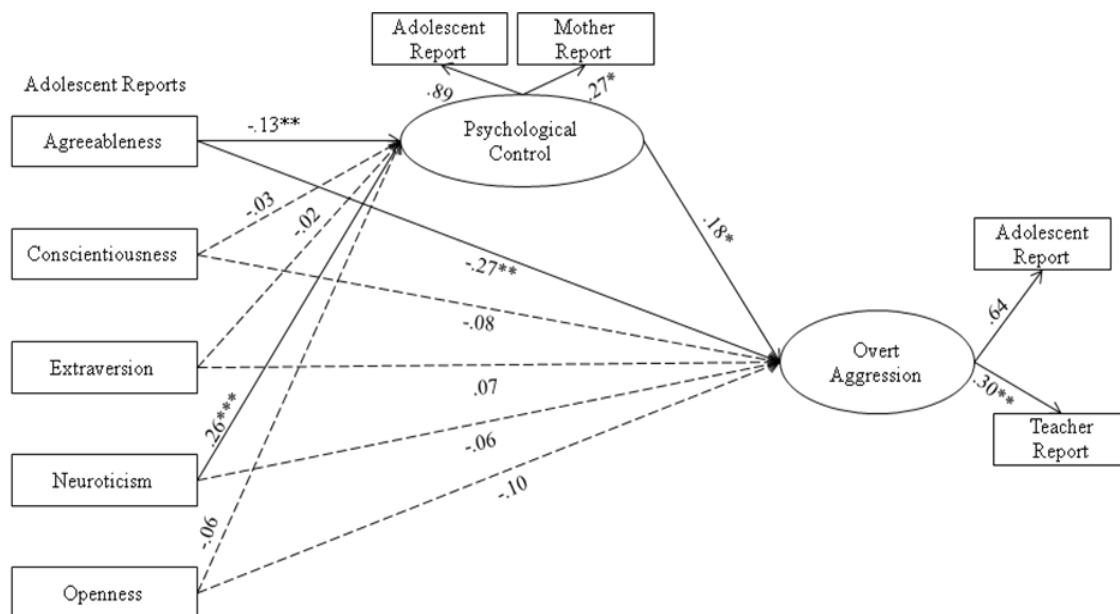
According to the results of the bootstrapping, none of the indirect pathways were found to be significant.

H3. 4. *Adolescents' personality traits have an effect on overt aggression through their mothers' psychological control.*

The adolescent-mother structural model of the effects of psychological control between adolescents' personality traits and overt aggression had a good model fit, $\chi^2 (11, N = 361) = 8.8, p = .000$ with GFI = .99, AGFI = .98, CFI = 1.00, and RMSEA = .00 (see

Figure 14).

Figure 14. Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Mothers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Two significant indirect pathways were found:

(a) Adolescents' agreeableness to their mothers' psychological control ($\beta = -.13$, $p < .05$), their mothers' psychological control to adolescents' overt aggression ($\beta = .18$, $p < .10$), and the direct effect between adolescents' agreeableness and their overt aggression ($\beta = -.27$, $p < .05$) - partial mediation.

(b) Adolescents' neuroticism to their mothers' psychological control ($\beta = .26$, $p < .001$), their mothers' psychological control to adolescents' overt aggression ($\beta = .18$, $p < .10$) - complete mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 8.

Table 8. Significance of Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Mothers' Reports of Psychological Control

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→PSY→OA	-.032 (-.088/ .040)	-.195/-.005	
Unstandardized Total Effect	-.116 (-.317/ .053)	Unstandardized Direct Effect AGRE→OA	-.083 (-.227/ .066)
NEUR→PSY→OA	.070 (.191/ .068)	.008/ .268	
Unstandardized Total Effect	-.024 (-.067/ .038)	Unstandardized Direct Effect NEUR→OA	-.094 (-.258/ .079)

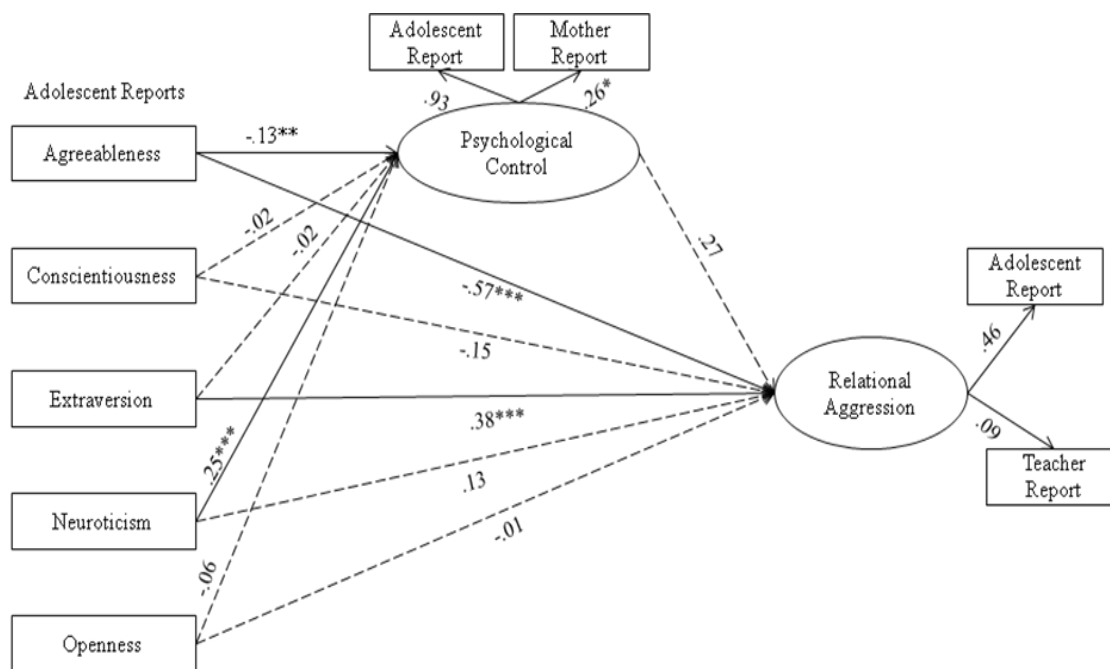
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of the bootstrapping, two indirect pathways from adolescents' agreeableness to overt aggression and adolescents' neuroticism to overt aggression through mothers' psychological control were significant.

H3. 5. Adolescents' personality traits have an effect on relational aggression through their mothers' psychological control.

The adolescent-mother structural model of the effects of psychological control between adolescents' personality traits and relational aggression had a good model fit, $\chi^2(11, N = 361) = 9.5, p = .000$ with GFI = .99, AGFI = .98, CFI = 1.00, and RMSEA = .00 (see Figure 15).

Figure 15. Indirect Effects between Adolescents' Personality Traits and Relational Aggression through Adolescents' and Mothers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

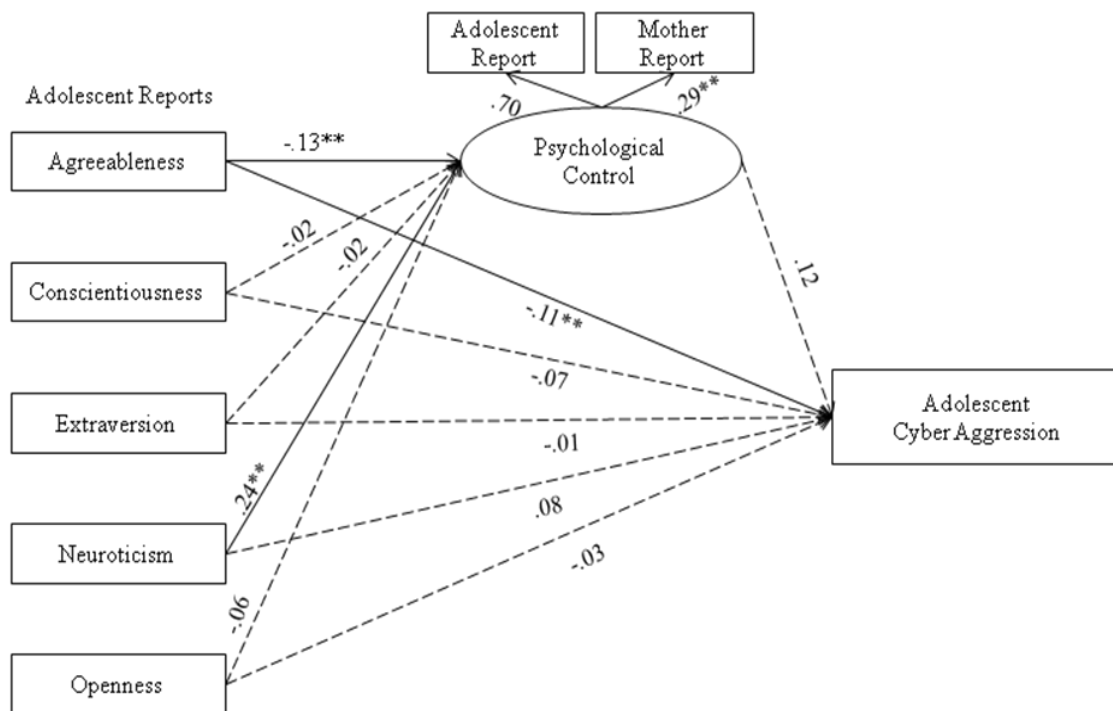
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' personality traits and relational aggression through their mothers' psychological control were significant.

H3. 6. *Adolescents' personality traits have an effect on cyber aggression through their mothers' psychological control.*

The adolescent-mother structural model of the effects of psychological control between adolescents' personality traits and cyber aggression had a good model fit, $\chi^2(5, N = 361) = 3.5, p = .628$ with GFI = .99, AGFI = .98, CFI = 1.00, and RMSEA = .00 (see Figure 16).

Figure 16. Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Mothers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

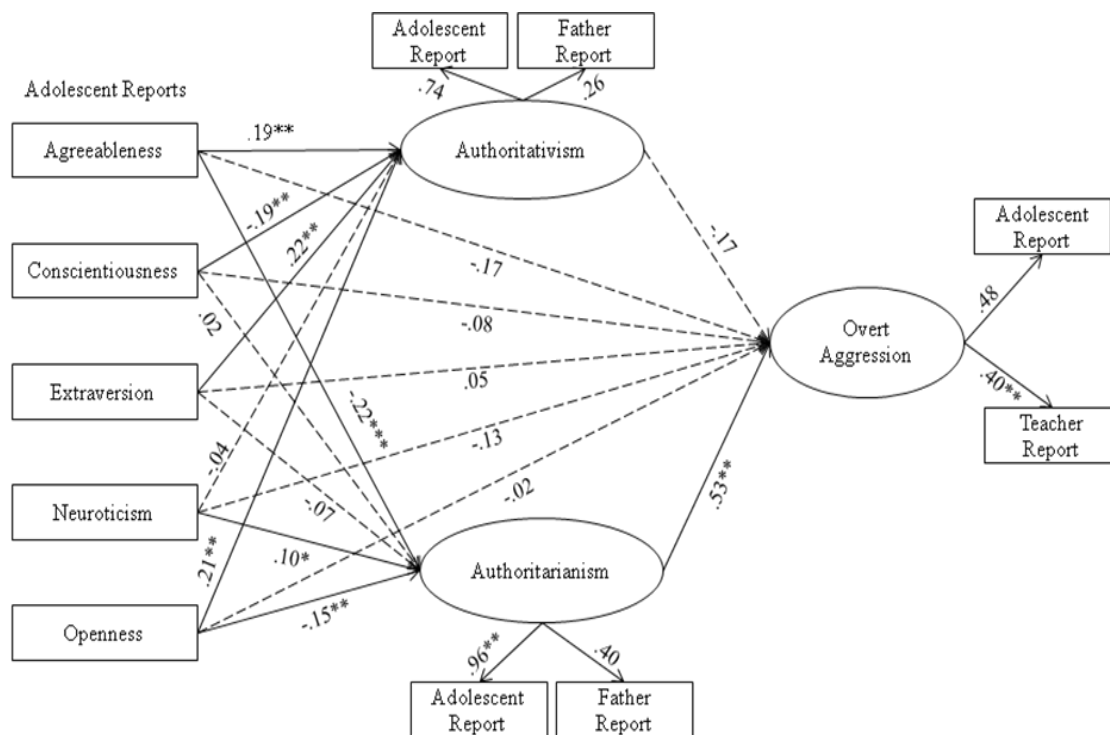
None of the pathways linking adolescents' personality traits and cyber aggression through their mothers' psychological control were significant.

H3. 7. Adolescents' personality traits have an effect on overt aggression through their fathers' authoritativism and authoritarianism.

The adolescent-father structural model of the effects of parenting styles between adolescents' personality traits and overt aggression had a reasonable model fit, $\chi^2 (22, N = 361) = 56.9, p = .000$ with GFI = .97, AGFI = .92, CFI = .88, and RMSEA = .07 (see Figure

17).

Figure 17. Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Fathers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Three significant indirect pathways were found:

(a) Adolescents' agreeableness to their fathers' authoritarianism ($\beta = -.22, p < .001$), their fathers' authoritarianism to adolescents' overt aggression ($\beta = .53, p < .05$) - complete mediation

(b) Adolescents' neuroticism to their fathers' authoritarianism ($\beta = .10, p < .10$), their fathers' authoritarianism to adolescents' overt aggression ($\beta = .53, p < .05$) - complete

mediation

(c) Adolescents' openness to their fathers' authoritarianism ($\beta = -.15, p < .05$), their fathers' authoritarianism to adolescents' overt aggression ($\beta = .53, p < .05$) - complete mediation

Bootstrapping was used to examine these three pathways' significance. The results are presented in Table 9.

Table 9. Significance of Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Fathers' Reports of Parenting Styles

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→AUTH→OA	.022 (-.047/ .021)	-.054/ .000	
Unstandardized Total Effect	-.138 (-.309/ .044)	Unstandardized Direct Effect AGRE→OA	-.098 (-.220/ .084)
NEUR→AUTH→OA	.001 (.004/ .017)	.000/ .044	
Unstandardized Total Effect	-.012 (-.027/ .041)	Unstandardized Direct Effect NEUR→OA	-.028 (-.062/ .052)
OPEN→AUTH→OA	.001 (.003/0.087)	-.282/ .005	
Unstandardized Total Effect	-.053 (-.118/ .041)	Unstandardized Direct Effect OPEN→OA	-.028 (-.063/ .101)

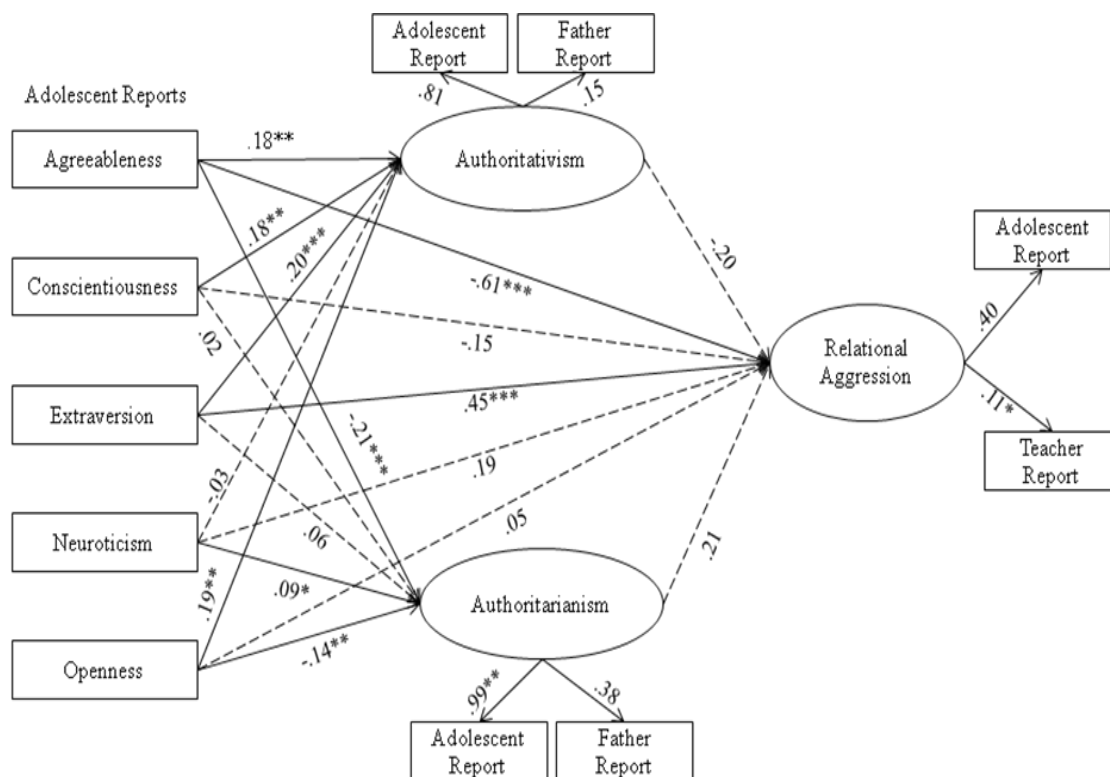
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of the bootstrapping, two indirect pathways from adolescents' agreeableness to overt aggression and adolescents' neuroticism to overt aggression through fathers' authoritarianism were significant.

H3. 8. *Adolescents' personality traits have an effect on relational aggression through their fathers' authoritative and authoritarianism.*

The adolescent-father structural model of the effects of parenting styles between adolescents' personality traits and relational aggression had a reasonable model fit, χ^2 (22, $N = 361$) = 59.8, $p = .000$ with GFI = .97, AGFI = .91, CFI = .87, and RMSEA = .07 (see Figure 18).

Figure 18. Indirect Effects between Adolescents' Personality Traits and Relational Aggression through Adolescents' and Fathers' Reports of Parenting Styles

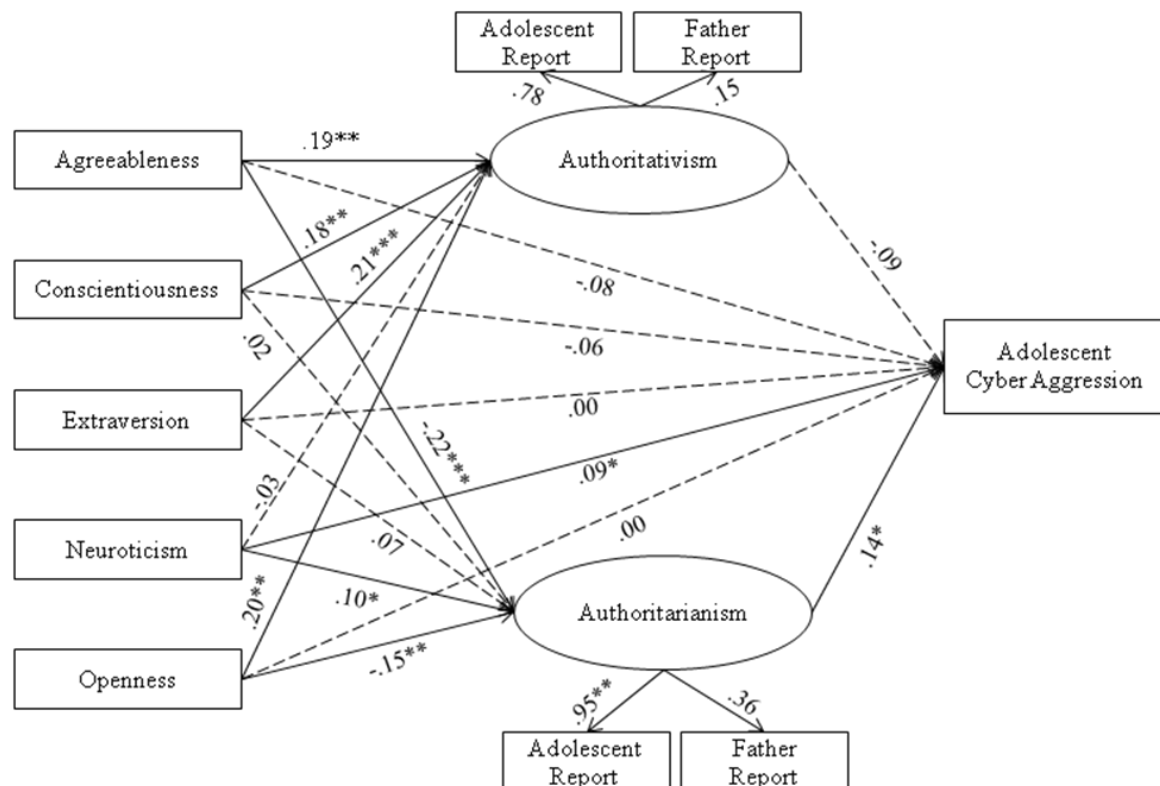


None of the pathways linking adolescents' personality traits and relational aggression through their fathers' authoritativism and authoritarianism were significant.

H3. 9. *Adolescents' personality traits have an effect on cyber aggression through their fathers' authoritativism and authoritarianism.*

The adolescent-father structural model of the effects of parenting styles between adolescents' personality traits and cyber aggression had a reasonable model fit, $\chi^2 (14, N = 361) = 48.2, p = .000$ with GFI = .98, AGFI = .90, CFI = .87, and RMSEA = .08 (see Figure 19).

Figure 19. Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Fathers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Three significant indirect pathways were found:

(a) Adolescents' agreeableness to their fathers' authoritarianism ($\beta = -.22, p < .001$), their fathers' authoritarianism to adolescents' cyber aggression ($\beta = .14, p < .10$) - complete mediation

(b) Adolescents' neuroticism to their fathers' authoritarianism ($\beta = .10, p < .10$), their fathers' authoritarianism to adolescents' cyber aggression ($\beta = .14, p < .10$), and the direct

effect between adolescents' neuroticism and their cyber aggression ($\beta = .09, p < .10$) -

partial mediation

(c) Adolescents' openness to their fathers' authoritarianism ($\beta = -.15, p < .05$), their fathers' authoritarianism to adolescents' cyber aggression ($\beta = .14, p < .10$) - complete mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 10.

Table 10. Significance of Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Fathers' Reports of Parenting Styles

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→AUTH→CA	-.013 (-.020/ .054)	-.233/.004	
Unstandardized Total Effect	-.079 (-.122/ .035)	Unstandardized Direct Effect AGRE→CA	-.044 (-.069/ .056)
NEUR→AUTH→CA	.014 (.021/.018)	-.014/ .076	
Unstandardized Total Effect	.070 (.109/ .030)	Unstandardized Direct Effect NEUR→ CA	.062 (.096/ .035)
OPEN→AUTH→CA	.001 (.001/ .056)	-.079/ .119	
Unstandardized Total Effect	-.027 (-.041/ .037)	Unstandardized Direct Effect OPEN→ CA	-.001 (-.002/ .066)

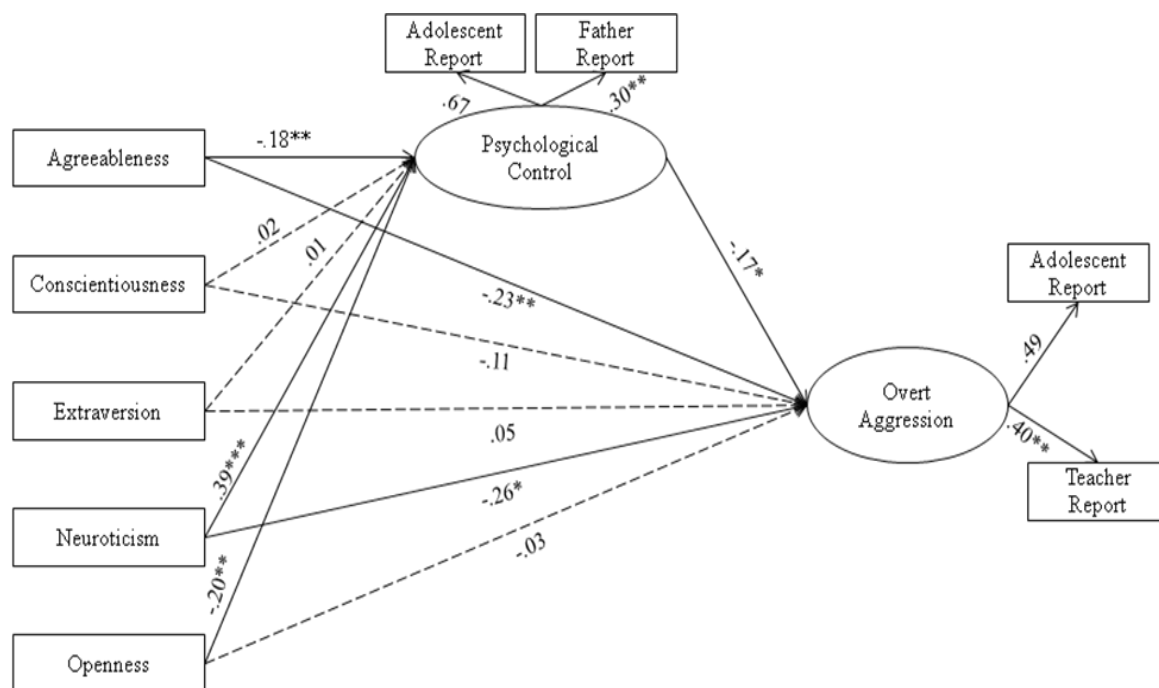
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of the bootstrapping, none of indirect pathways were significant.

H3. 10. *Adolescents' personality traits have an effect on overt aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' personality traits and overt aggression had a good model fit, $\chi^2(11, N = 361) = 12.7, p = .248$ with GFI = .99, AGFI = .97, CFI = .98, and RMSEA = .03 (see Figure 20).

Figure 20. Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Fathers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

Three significant indirect pathways were found:

- (a) Adolescents' agreeableness to their fathers' psychological control ($\beta = -.18, p$

< .05), their fathers' psychological control to adolescents' overt aggression ($\beta = -.17, p < .10$), and the direct effect between adolescents' agreeableness and their overt aggression ($\beta = -.23, p < .05$) - partial mediation

(b) Adolescents' neuroticism to their fathers' psychological control ($\beta = .39, p < .001$), their fathers' psychological control to adolescents' overt aggression ($\beta = -.17, p < .10$), and the direct effect between adolescents' neuroticism and their overt aggression ($\beta = -.26, p < .10$) - partial mediation

(c) Adolescents' openness to their fathers' psychological control ($\beta = -.20, p < .05$), their fathers' psychological control to adolescents' overt aggression ($\beta = -.17, p < .10$) - complete mediation

Bootstrapping was used to examine these two pathways' significance. The results are presented in Table 11.

Table 11. Significance of Indirect Effects between Adolescents' Personality Traits and Overt Aggression through Adolescents' and Fathers' Reports of Psychological Control

Mediational Pathways	Unstandardized Indirect Effect (Standardized/SE)	Bootstrapping 95% Confidence Interval	
		Bias-Corrected	
		Low/Upper	
AGRE→PSY→OA	-.011 (-.023/ .013)	-.227/ -.050	
Unstandardized Total Effect	-.143 (-.297/ .045)	Unstandardized Direct Effect AGRE→ OA	-.131 (-.272/ .046)
NEUR→PSY→OA	.022 (.047/ .025)	.000/ .102	
Unstandardized Total Effect	-.007 (-.015/ .043)	Unstandardized Direct Effect NEUR→ OA:	-.030 (-.064/ .049)
OPEN→PSY→OA	-.005 (.011/ .009)	-.043/ .003	
Unstandardized Total Effect	-.053 (-.111/ .042)	Unstandardized Direct Effect OPEN→OA	-.048 (-.100/ .042)

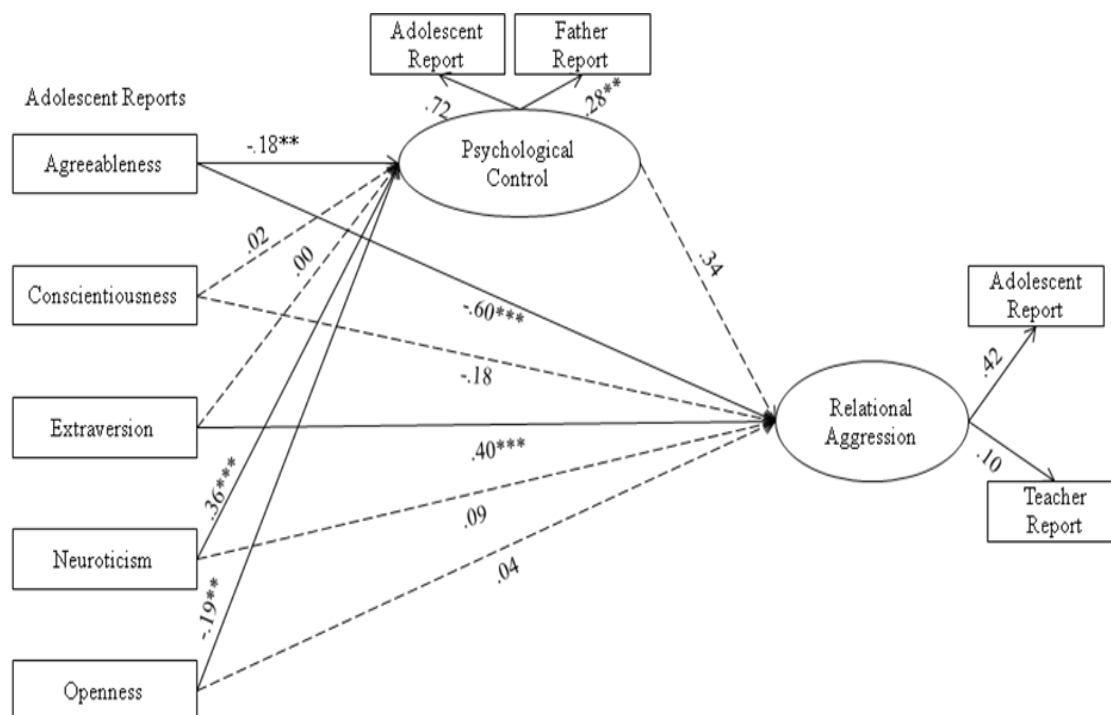
Note: Standardized effects are presented in parentheses. Total and direct effects are presented in the lower row of the model: Unstandardized direct effect (standardized direct effect/SE), AGRE= Agreeableness, CONS= Conscientiousness, EXTR= Extraversion, NEUR= Neuroticism, OPEN=Openness to express, AUTH= Authoritarianism, AUTHO= Authoritativism, PSY= Psychological Control, OA= Overt Aggression, RA= Relational Aggression, and CA= Cyber Aggression.

According to the results of bootstrapping, two indirect pathways from adolescents' agreeableness to overt aggression and adolescents' neuroticism to overt aggression through fathers' psychological control were found to be significant.

H3. 11. *Adolescents' personality traits have an effect on relational aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' personality traits and relational aggression had a good model fit, $\chi^2 (11, N = 361) = 12.3, p = .248$ with GFI = .99, AGFI = .97, CFI = .99, and RMSEA = .02 (see Figure 21).

Figure 21. Indirect Effects between Adolescents' Personality Traits and Relational Aggression through Adolescents' and Fathers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

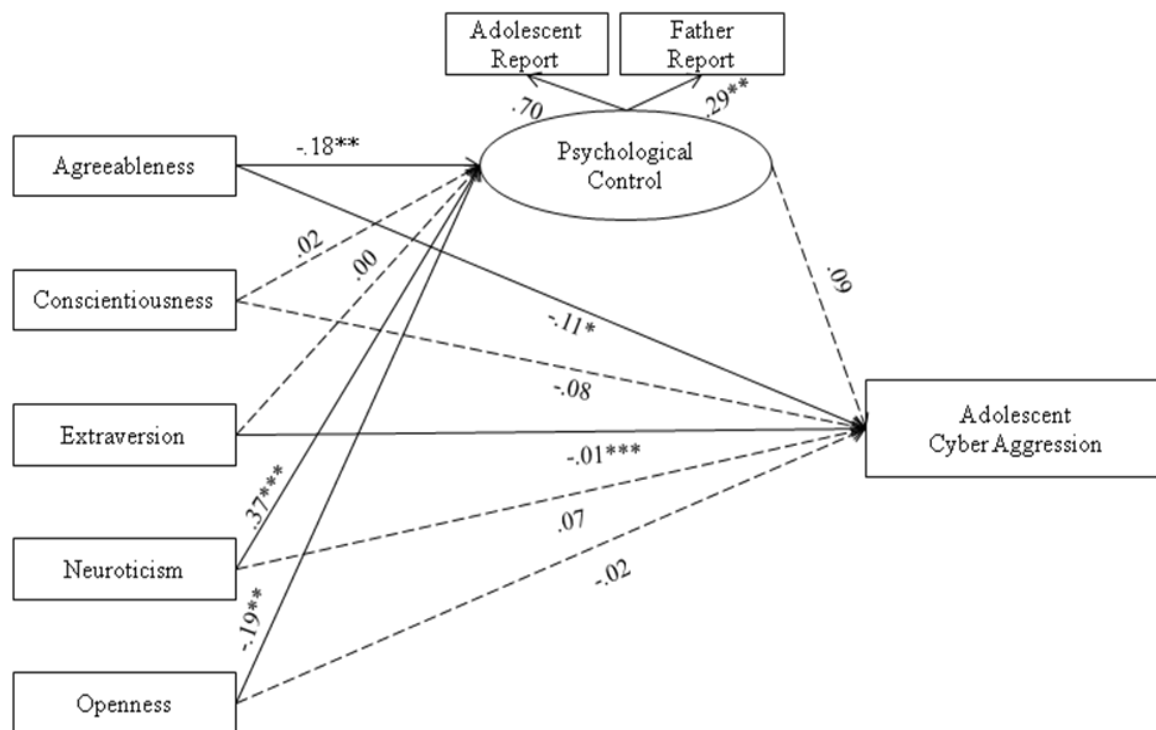
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' personality traits and relational aggression through their fathers' psychological control were significant.

H3. 12. *Adolescents' personality traits have an effect on cyber aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' personality traits and cyber aggression had a good model fit, $\chi^2 (5, N = 361) = 4.5, p = .474$ with GFI = .99, AGFI = .98, CFI = 1.00, and RMSEA = .00 (see Figure 22).

Figure 22. Indirect Effects between Adolescents' Personality Traits and Cyber Aggression through Adolescents' and Fathers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' personality traits and cyber aggression through their fathers' psychological control were significant.

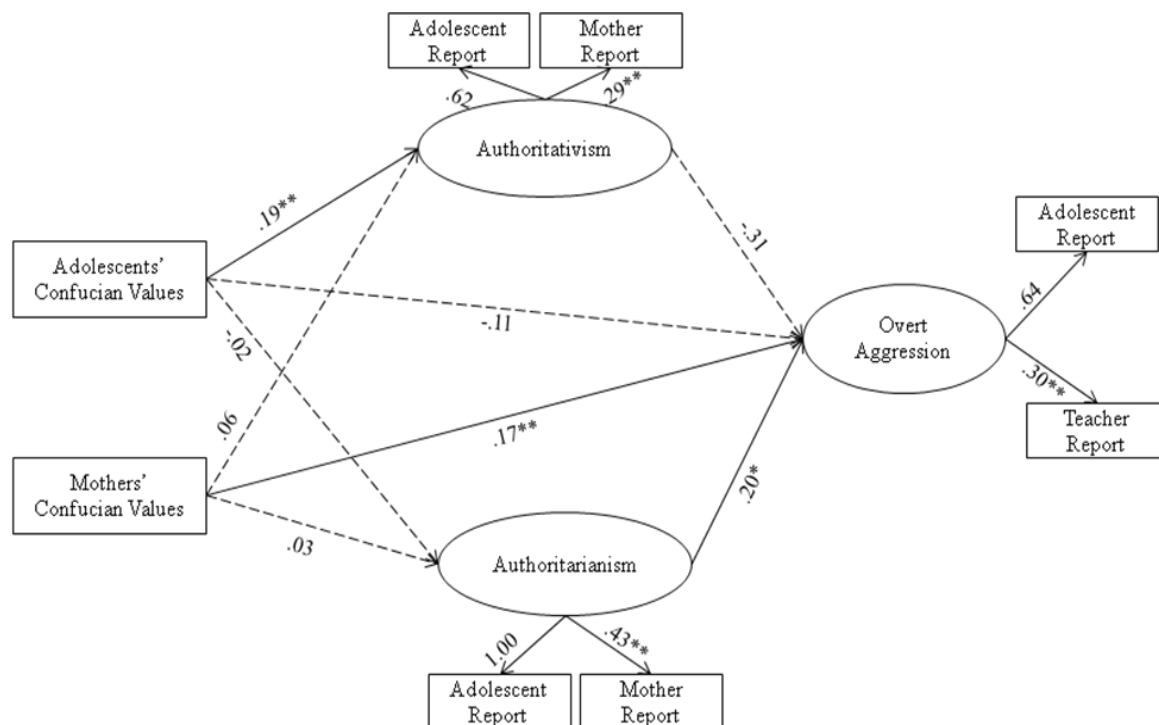
Research question 4. Do Confucian values affect overt, relational, and cyber aggression through parenting typologies and psychological control?

H4. 1. *Both adolescents' and mothers' Confucian values have an effect on adolescents' overt aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the indirect effects of parenting styles

between adolescents' and mothers' Confucian values and adolescents' overt aggression indicated a poor fit - $\chi^2 (14, N = 361) = 54.6, p = .000$ with GFI = .97, AGFI = .91, CFI = .76, and RMSEA = .09. The initial analysis of this hypothesis produced unacceptable statistics; therefore modification indices (MI) were evaluated to determine how to improve the model. MI statistics indicated that one parameter would need to be freed to covary in order to improve the model fit. Therefore, the error term was freed among the adolescents' reports and the mothers' reports of authoritarianism and authoritarianism to improve the model fit. The modified model had a good model fit, $\chi^2 (13, N = 361) = 27.6, p = .010$ with GFI = .98, AGFI = .95, CFI = .91, and RMSEA = .06 (see Figure 23).

Figure 23. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Overt Aggression through Adolescents' and Mothers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

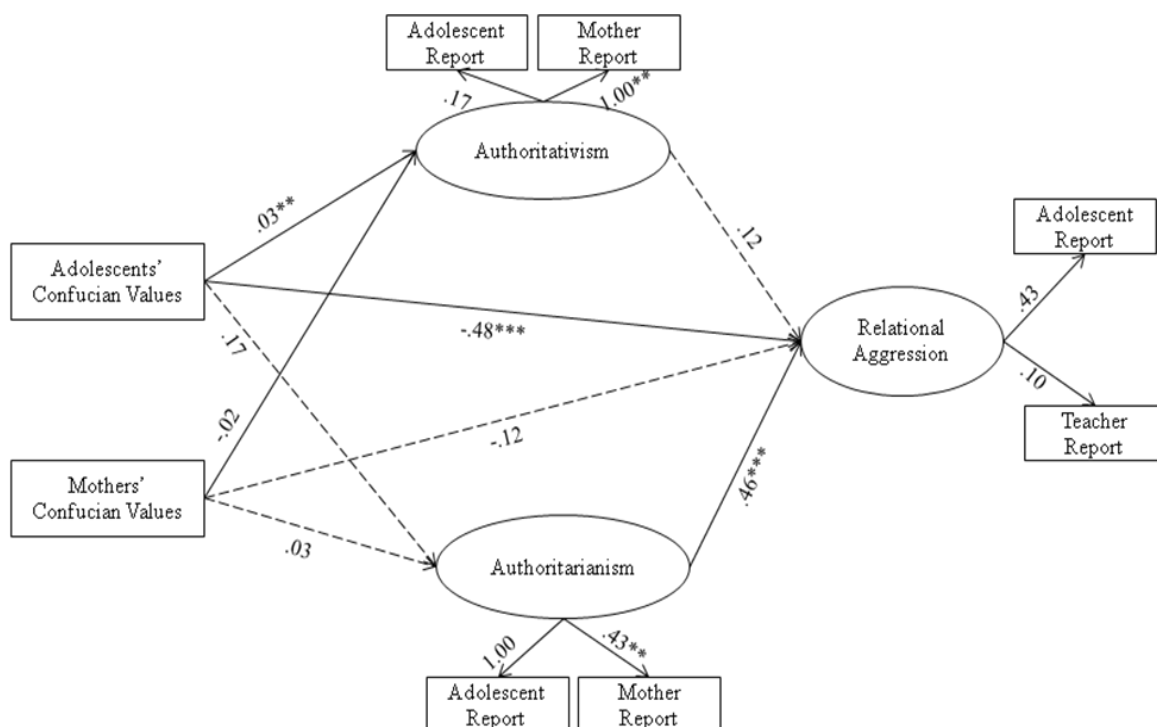
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and mothers' Confucian values and adolescents' overt aggression through their mothers' authoritativism and authoritarianism were significant.

H4. 2. *Both adolescents' and mothers' Confucian values have an effect on adolescents' relational aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the indirect effects of parenting styles between adolescents' and mothers' Confucian values and adolescents' relational aggression had a reasonable model fit, $\chi^2 (15, N = 361) = 49.9, p = .000$ with GFI = .97, AGFI = .92, CFI = .78, and RMSEA = .08 (see Figure 24)

Figure 24. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Relational Aggression through Adolescents' and Mothers' Reports of Parenting Styles



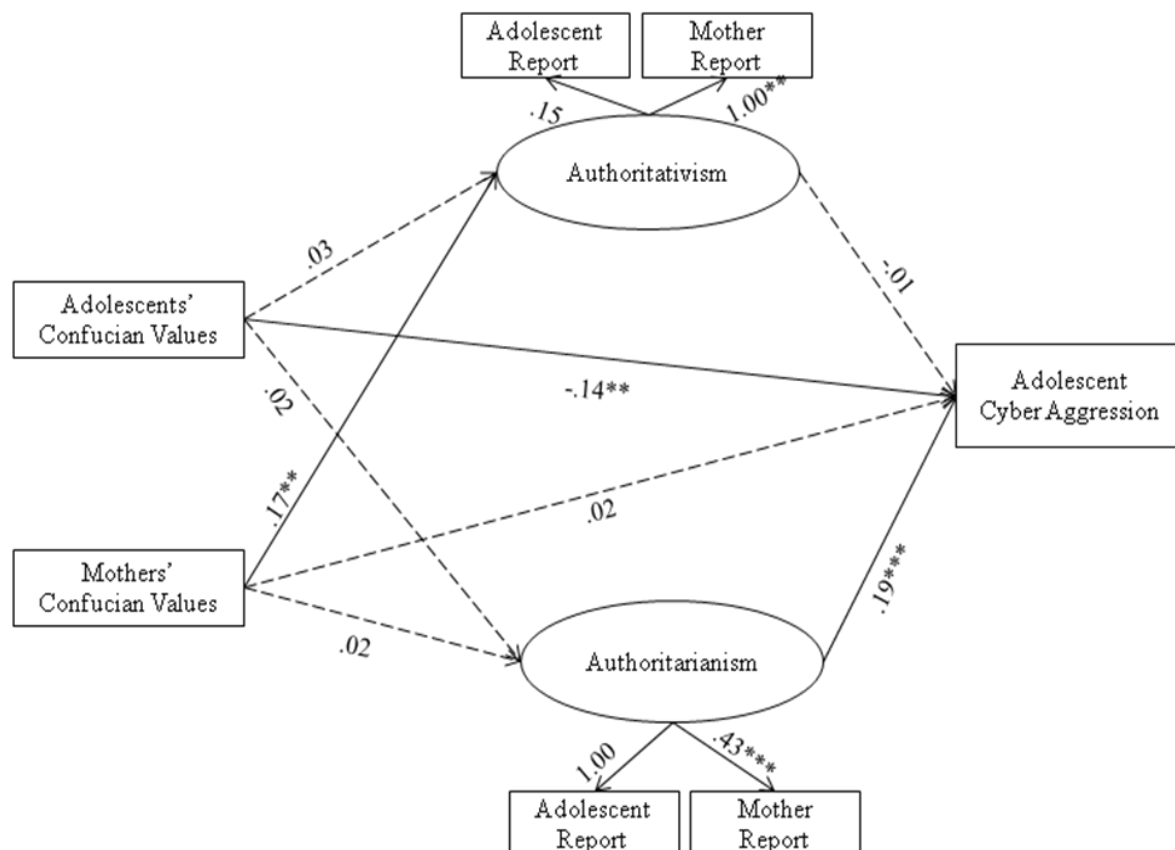
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and mothers' Confucian values and adolescents' relational aggression through their mothers' authoritativism and authoritarianism were significant.

H4. 3. *Both adolescents' and mothers' Confucian values have an effect on adolescents' cyber aggression through their mothers' authoritativism and authoritarianism.*

The adolescent-mother structural model of the indirect effects of parenting styles between adolescents' and mothers' Confucian values and adolescents' cyber aggression indicated a poor fit - $\chi^2 (10, N = 361) = 46.6, p = .000$ with GFI = .97, AGFI = .90, CFI = .75, and RMSEA = .10. The initial analysis of this hypothesis produced unacceptable statistics; therefore, modifications indices (MI) were evaluated to determine how to improve the model. MI statistics indicated that one parameter would need to be freed to covary in order to improve the model fit. Therefore, the error term was freed among the adolescents' reports and mothers' reports of authoritarianism and authoritativism to improve the model fit. The modified model had a good model fit, $\chi^2 (9, N = 361) = 22.6, p = .007$ with GFI = .98, AGFI = .95, CFI = .91 and RMSEA = .07. (see Figure 25)

Figure 25. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Cyber Aggression through Adolescents' and Mothers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

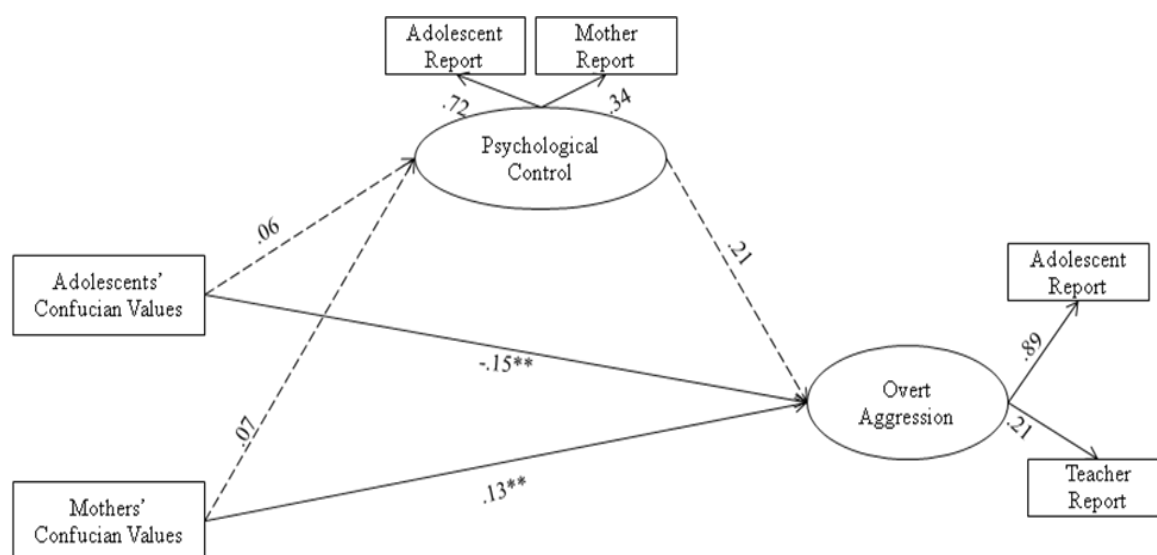
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and mothers' Confucian values and adolescents' cyber aggression through their mothers' authoritativism and authoritarianism were significant.

H4. 4. *Both adolescents' and mothers' Confucian values have an effect on adolescents' overt aggression through their mothers' psychological control.*

The adolescent-mother structural model of the effects of psychological control between adolescents' and mothers' Confucian values and adolescents' overt aggression had a good model fit, $\chi^2 (5, N = 361) = 3.3, p = .653$ with GFI = .99, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 26).

Figure 26. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Overt Aggression through Adolescents' and Mothers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
 Standardized betas are reported.
 Nonsignificant pathways are marked by dotted lines.

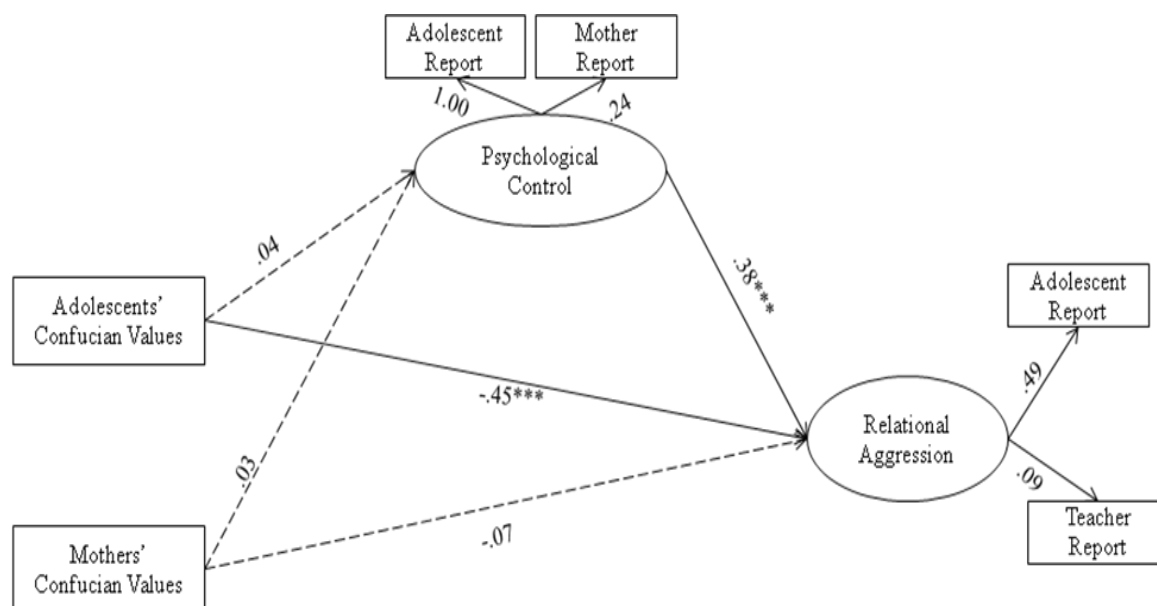
None of the pathways linking adolescents' and mothers' Confucian values and adolescents' overt aggression through their mothers' psychological were significant .

H4. 5. *Both adolescents' and mothers' Confucian values have an effect on adolescents' relational aggression through their mothers' psychological control.*

The adolescent-mother structural model of the effects of psychological control

between adolescents' and mothers' Confucian values and adolescents' relational aggression had a good model fit, $\chi^2 (5, N = 361) = 3.3, p = .653$ with GFI = .99, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 27).

Figure 27. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Relational Aggression through Adolescents' and Mothers' Reports of Psychological Control



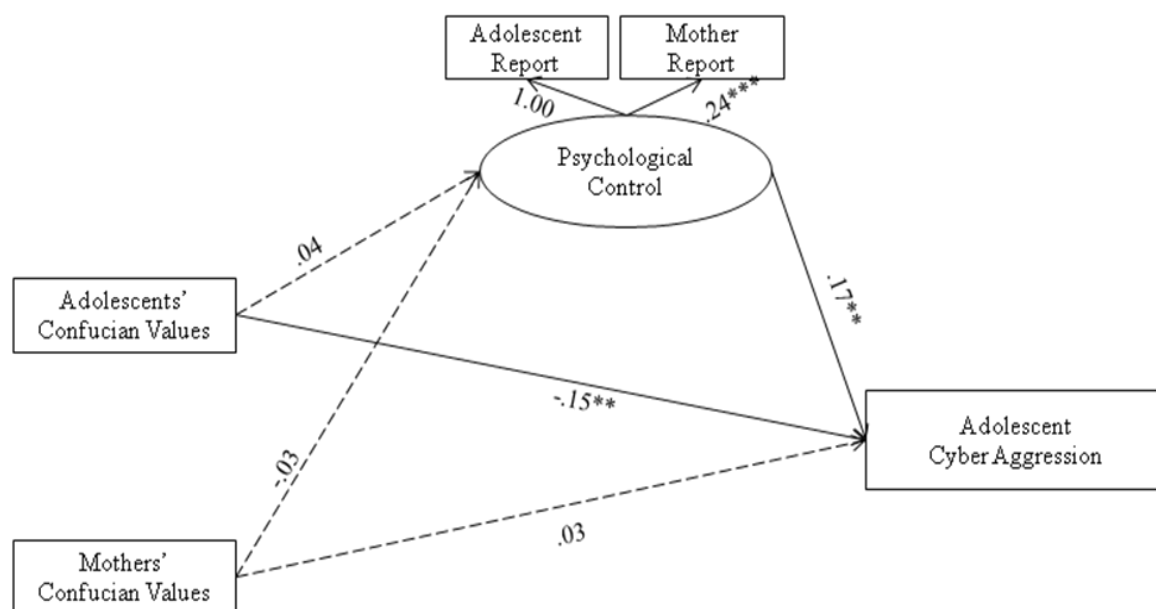
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and mothers' Confucian values and adolescents' relational aggression through their mothers' psychological control were significant.

H4. 6. *Both adolescents' and mothers' Confucian values have an effect on adolescents' cyber aggression through their mothers' psychological control.*

The adolescent-mother structural model of the effects of psychological control between adolescents' and mothers' Confucian values and adolescents' cyber aggression had a good model fit, $\chi^2 (5, N = 361) = 3.3, p = .653$ with GFI = .99, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 28).

Figure 28. Indirect Effects between Adolescents' and Mothers' Confucian Values and Adolescents' Cyber Aggression through Adolescents' and Mothers' Reports of Psychological Control



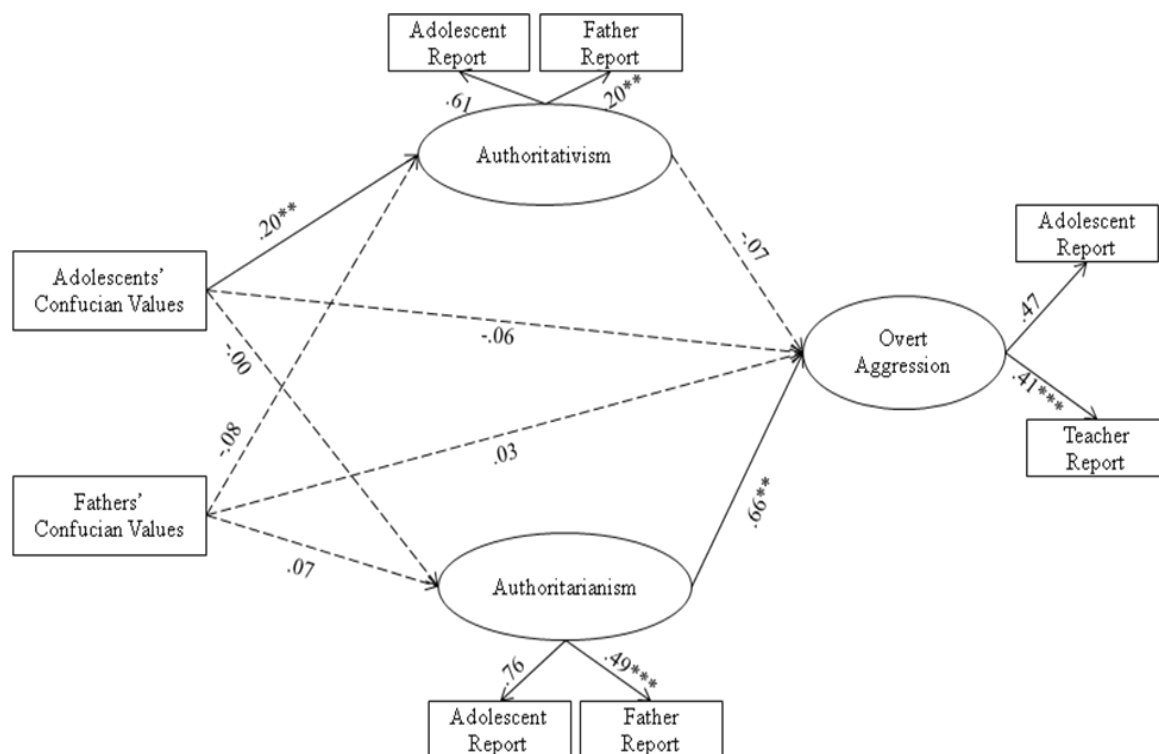
None of the pathways linking adolescents' and mothers' Confucian values and adolescents' cyber aggression through their mothers' psychological control were significant.

H4. 7. *Both adolescents' and fathers' Confucian values have an effect on adolescents' overt aggression through their fathers' authoritativism and authoritarianism.*

The adolescent-father structural model of the indirect effects of parenting styles between adolescents' and fathers' Confucian values and adolescents' overt aggression had a

good model fit, $\chi^2 (12, N = 361) = 30.5, p = .002$ with GFI = .98, AGFI = .94, CFI = .90, and RMSEA = .07 (see Figure 29).

Figure 29. Indirect Effects between Adolescents' and Fathers' Confucian Values and Overt Aggression through Adolescents' and Fathers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

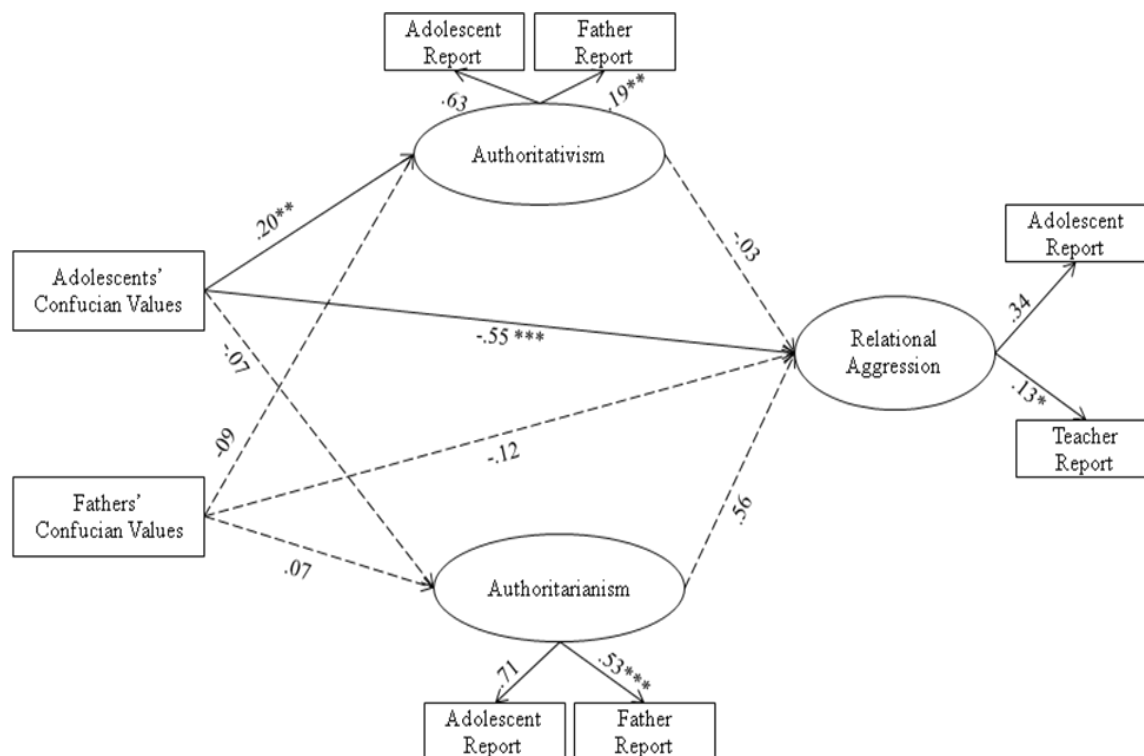
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and fathers' Confucian values and adolescents' overt aggression through their fathers' authoritativism and authoritarianism were significant.

H4. 8. *Both adolescents' and fathers' Confucian values have an effect on adolescents' relational aggression through their fathers' authoritativism and authoritarianism.*

The adolescent-father structural model of the indirect effects of parenting styles between adolescents' and fathers' Confucian values and adolescents' relational aggression had a reasonable model fit, $\chi^2 (12, N = 361) = 28.9, p = .004$ with GFI = .98, AGFI = .94, CFI = .88, and RMSEA = .06 (see Figure 30).

Figure 30. Indirect Effects between Adolescents' and Fathers' Confucian Values and Relational Aggression through Adolescents' and Fathers' Reports of Parenting Styles



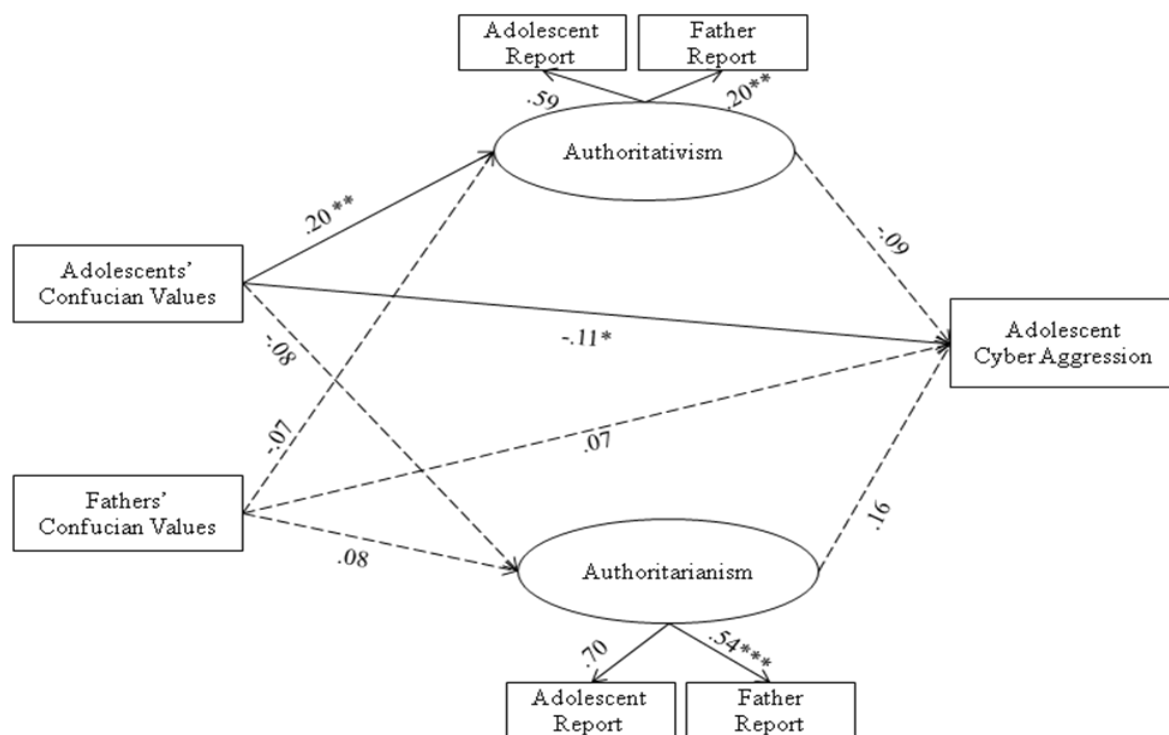
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
Standardized betas are reported.
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and fathers' Confucian values and adolescents' relational aggression through their fathers' authoritativism and authoritarianism were significant.

H4. 9. *Both adolescents' and fathers' Confucian values have an effect on adolescents' cyber aggression through their fathers' authoritativism and authoritarianism.*

The adolescent-father structural model of the indirect effects of parenting styles between adolescents' and fathers' Confucian values and adolescents' cyber aggression had a reasonable model fit, $\chi^2 (7, N = 361) = 22.8, p = .002$ with GFI = .98, AGFI = .93, CFI = .89, and RMSEA = .08 (see Figure 31).

Figure 31. Indirect Effects between Adolescents' and Fathers' Confucian Values and Cyber Aggression through Adolescents' and Fathers' Reports of Parenting Styles



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

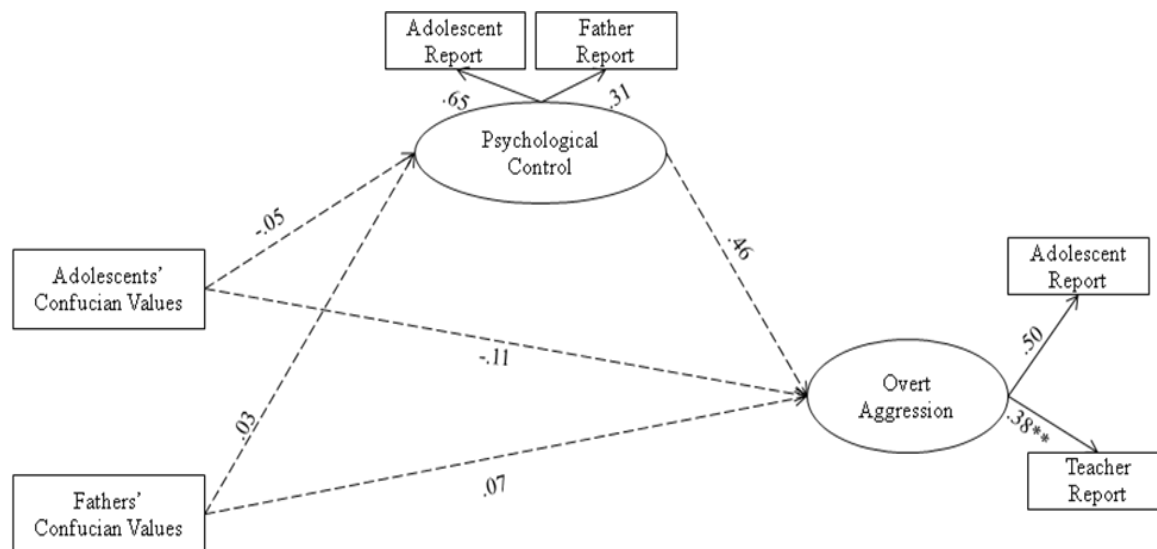
None of the pathways linking adolescents' and fathers' Confucian values and

adolescents' cyber aggression through their fathers' authoritarianism and authoritarianism were significant.

H4. 10. *Both adolescents' and fathers' Confucian values have an effect on adolescents' overt aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' and fathers' Confucian values and adolescents' overt aggression had a good model fit, $\chi^2 (5, N = 361) = 7.4, p = .192$ with GFI = .99, AGFI = .97, CFI = .94, and RMSEA = .04 (see Figure 32).

Figure 32. Indirect Effects between Adolescents' and Fathers' Confucian Values and Overt Aggression through Adolescents' and Fathers Reports' of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

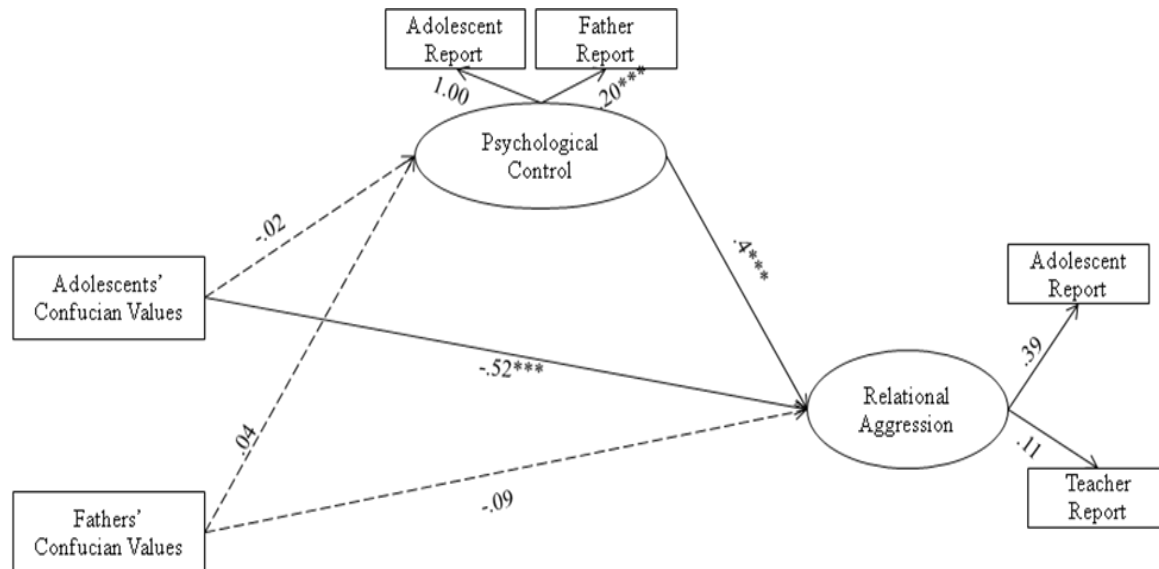
Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and fathers' Confucian values and adolescents' overt aggression through their fathers' psychological control were significant.

H4. 11. *Both adolescents' and fathers' Confucian values have an effect on adolescents' relational aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' and fathers' Confucian values and adolescents' relational aggression had a good model fit, $\chi^2 (6, N = 361) = 2.9, p = .820$ with GFI = .99, AGFI = .99, CFI = 1.00 and RMSEA = .00 (see Figure 33).

Figure 33. Indirect Effects between Adolescents' and Fathers' Confucian Values and Adolescents' Relational Aggression through Adolescents' and Fathers' Reports of Psychological Control



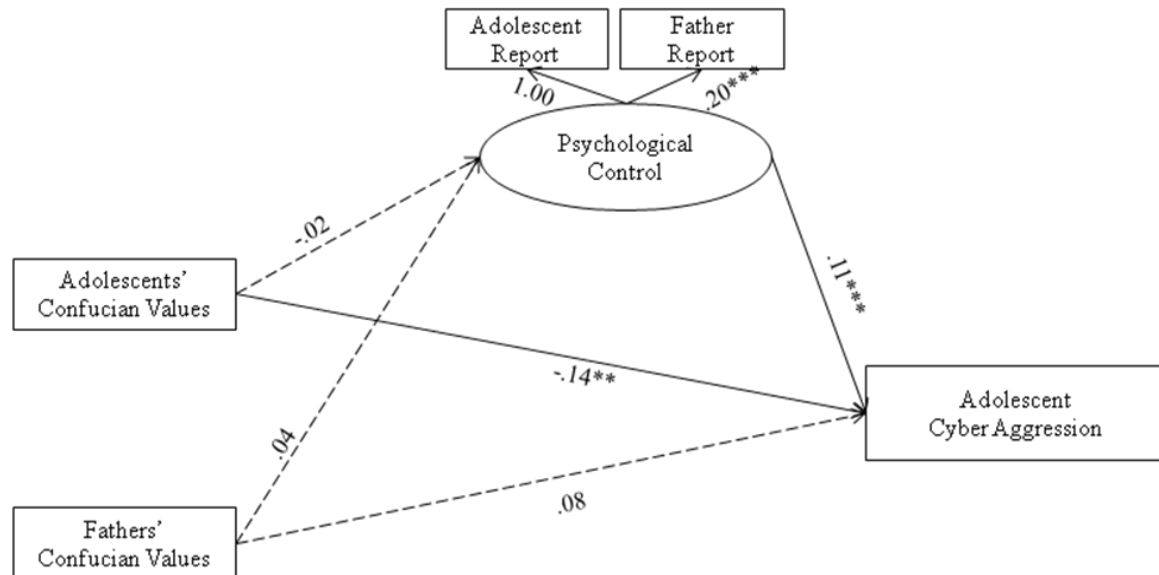
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.
 Standardized betas are reported.
 Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and fathers' Confucian values and adolescents' relational aggression through their fathers' psychological control were significant.

H4. 12. *Both adolescents' and fathers' Confucian values have an effect on adolescents' cyber aggression through their fathers' psychological control.*

The adolescent-father structural model of the effects of psychological control between adolescents' and fathers' Confucian values and adolescents' cyber aggression had a good model fit, $\chi^2(3, N = 361) = 2.3, p = .514$ with GFI = .99, AGFI = .99, CFI = 1.00, and RMSEA = .00 (see Figure 34).

Figure 34. Indirect Effects between Adolescents' and Fathers' Confucian Values and Adolescents' Cyber Aggression through Adolescents' and Fathers' Reports of Psychological Control



Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Standardized betas are reported.

Nonsignificant pathways are marked by dotted lines.

None of the pathways linking adolescents' and fathers' Confucian values and adolescents' cyber aggression through their fathers' psychological control were significant.

CHAPTER V

Discussion

Structural equation modeling was used to examine the associations among adolescents' personality traits, Confucian values, parenting styles (psychological control), and outcomes of overt, relational, and cyber adolescent aggressive behaviors in South Korean families. Five important findings from this study are discussed.

1. Findings from the factor analyses and reliability of constructs
2. The direct relationships between adolescents' personality traits and aggression
3. The direct relationships between Confucian values and aggression
4. The association between adolescents' personality traits and adolescent aggression through parenting styles and psychological control
5. The association between Confucian values and adolescent aggression through parenting styles and psychological control

Factor Structure of Measurement Scales

Big Five Personality. This study provides evidence of the replicability of personality factors in Korean culture. However, the findings of this study about the factor structure of personality differed slightly from the original Big Five factor scales in those eighteen items (e.g., "Is reserved" and "Can be somewhat careless") and were either double loading or loaded below .30. Although personality dimensions assessed by Western society have been tested in new cultural contexts and the Big Five has been distinguished as the predominant method for assessing personality (Scholte & De Bruyn, 2004), there is some question about

its application to Asian cultures (Juni, 1996). Furthermore, the findings from the Big Five structure in Asian cultures have been inconsistent (Hahn et al., 1999; Piedmont & Chae, 1997; Wang et al., 2005). Scholte and De Bruyn (2004) reported that factors emerged with incongruent meaning compared to the original Big Five descriptions with cross-cultural generalizability. Therefore, when using personality scales, it is necessary to understand the profound differences in language, culture, and psychiatric status among each sample. Although some items of the personality scales were deleted from the factor loading, each of the five factors was well categorized into each subgroup so they appeared to function relatively well within Korean adolescents in this study.

Confucian Cultural Values. The structure factor of the Confucian cultural values for this sample shows some differences from the original Confucian values. Two of the four factors from the original measurement did not emerge in this sample -integrity and tolerance - and Confucian Ethos was replicated. The meanings of integrity and the Confucian scale connote traditional Korean values such as filial piety, hard work, and few desires. On the other hand, Korean families in this study tend to be likely to place less emphasis on social rituals, solidarity with others, or moral discipline. This finding is consistent with previous research that Confucian cultural values have been mixed in cross-cultural studies (Oh, 2005; Zhang et al., 2005). Zhang et al. (2005) found that three factors of cultural values, indicating interpersonal harmony, relational hierarchy, and traditional conservatism, were emphasized among families in China, Korea, Japan, and Taiwan.

Consequently, this finding regarding the two factors of Confucian cultural values is

meaningful among Korean families, because Korean parents may emphasize their Confucian cultural values to their children based on their understanding of culture, social norms, and experiences within Korean society. Also, Korean children and adolescents learn from their parents and other society members about which cultural values are important in Korean society and which cultural values they should focus on in the current Korean society.

Parenting Styles. The factor structure of parenting styles indicates a different result—that only two factors (authoritarianism and authoritativism) emerged in this study. A cross-cultural study has examined the link between parenting styles and adolescent outcomes in diverse populations, and it has been found that three factors appeared in these studies (Baumrind, 1971; Lamborn et al., 1991; Lee & Moon, 2007; Maccoby & Martin, 1983). Several previous studies have found that three parenting styles (authoritarianism, authoritativism, and permissiveness) appeared among Korean families (Kim & Chung, 2007; Lee & Moon, 2007). For instance, authoritarian and authoritativism parenting had positive or mixed impacts on children's and adolescents' cognitive, psychological, and behavioral outcomes, whereas permissive parenting had negative impacts on children's outcomes (Kim & Chung, 2007; Kim & Rohner, 2002; Lee & Moon, 2007).

Contrary to the previous findings, Raval et al. (2012) did not support a three-factor structure of parenting styles. They found a mixture of authoritative, authoritarian, and permissive items in the first component, authoritarian items in the second component, and permissive items in the third component (Raval, Ward, Raval, Trivedi, 2012). Also,

Reitman et al. (2002) concluded that the factor structure of parenting styles is significantly influenced by the sample characteristics, such as ethnicity and SES (Reitman, Rhode, Hupp, & Altobello, 2012).

Although the measurement of parenting styles is well known to be used in various cultures, parenting scales are also needed to be considered in order to understand how cultural and social values and norms affect parenting behaviors in each culture. Therefore, the findings of two factors (authoritarianism and authoritativism) in this study are meaningful because it may be possible that Korean parents with middle school adolescents are less likely to use their permissive parenting.

Direct Effects of Adolescent Personality Traits

The first research question examined the direct association between adolescents' personality traits and overt, relational, and cyber aggression. In this study, adolescents' agreeableness, extraversion, and neuroticism were associated with adolescent overt, relational, and cyber aggression. More specifically, there were significant negative paths from adolescents' agreeableness to their overt, relational, and cyber aggression. There was a significant positive path from adolescents' extraversion to their relational aggression. There were significant positive paths from adolescents' neuroticism to their relational aggression and from adolescents' neuroticism to their cyber aggression.

In the current study, adolescents with high agreeableness exhibited lower levels of aggressive behavior problems. Highly agreeable adolescents were characterized as helpful, cooperative, and kind in addressing others' needs and emotions. Therefore, adolescents

who are more agreeable tend to maintain positive and healthy relationships with others. These findings are consistent with previous studies that have also demonstrated that agreeable people desire to maintain harmonious relationships with others and to minimize interpersonal conflicts (Barlett & Anderson, 2012; Gleason et al., 2004; Jensen-Campbell & Graziano, 2001; Jensen-Campbell, Gleason, & Adams, 2003; Miller et al., 2003). For instance, Prinzie et al. (2003, 2004) reported that high levels of agreeableness were associated with lower levels of overt and relational aggressive problem behaviors. A review of the Korean study also revealed similar findings that there was a negative and direct association between agreeableness and aggression of Korean adolescents (Youn, 1995).

The results indicated that extraversion and neuroticism was positively linked with relational aggression, which supports several previous studies that have demonstrated positive association between extraversion and aggression and between neuroticism and aggression (Cho, 2006; Ehrler et al., 1999; Prinzie et al., 2005; Sharpe & Desai, 2001). The positive association between extraversion and aggression indicated that high levels of extraversion were associated with more aggressive behavior. In other words, adolescents with high levels of extraversion are less likely to be involved in peer acceptance and friendship. The positive association between neuroticism and aggression indicated that adolescents with high levels of neuroticism were more likely to engaging in overt and relational aggression. Adolescents who exhibit neuroticism also experienced peer-oriented and social problems. For example, Lee (2010) found that high levels of extraversion are associated with covert and overt aggression among Korean middle school students.

Conscientiousness and openness to experiences were not found to be associated with Korean adolescents' aggression in this study. Korean adolescents, whether they have high or low impulses and temptation and high or low active imagination and intellectual curiosity, did not affect adolescents' aggression in this study. This is somewhat surprising, as previous studies have found positive and negative associations between these two personality traits and aggression (Ehrler et al., 1999; Miller et al., 2003; Sharpe & Desai, 2001). In a study in the US, Barlett and Anderson (2012) found that openness to experience was directly related to physical aggression. Prinzie et al. (2003, 2004) also found that less-conscientious children showed more overt and relational aggression than did their counterparts in Belgian families. However, Gleason et al. (2004) reported that there was no evidence that adolescents' openness to experience was associated with adolescents' aggressive behavior problems.

Direct Effects of Cultural Values

The second research question inquired regarding the direct relationships between adolescents' and parental Confucian values and adolescents' overt, relational, and cyber aggression. As the hypotheses suggested, the present study found that cultural values were associated with adolescents' aggression in some ways.

In accordance with previous studies that indicated that children with high levels of Confucian values showed lower levels of aggression (Bergeron & Schneider, 2005; Loo & Rapport, 1998; Park et al., 2003), the findings of the present study revealed that adolescents' Confucian values were associated with aggressive behavioral problems. More

specifically, there was a significant negative path from adolescents' Confucian values to their relational and cyber aggression. This is also supported in the study by Park et al. (2003), who found that Korean adolescents showed lower aggression than their counterparts in Japan and the US. Another study by Loo and Rapport (1998) demonstrated that Asian children with high levels of cultural values were less likely to engage in aggression than children in the US.

Unlike the findings of previous research, indicating that Asian children showed more overt aggression than did American children (French et al., 2002; Ramirez et al., 2001; Stromshak, Bierman, Bruschi, Dodge, & Coie, 1999), there was no association between adolescent cultural values and their overt aggression in the present study.

With regard to the association between parental cultural values and their adolescents' aggression, the results of this study concluded that mothers' Confucian cultural values were associated with their adolescents' overt aggression, and fathers' Confucian cultural values were related to their adolescents' cyber aggression. There are no studies that have linked parental cultural values and their adolescents' aggression, so these findings of this study may present how Korean adolescents' aggression was affected by their parental cultural values.

Traditionally, collectivistic societies emphasize group harmony and connectedness, so interpersonal conflict and destructive behavior may be seen as shameful behavior and as a threat to harmony, and thus these behavioral problems are socially discouraged (Bond, 2004; Triandis, 1995). Based on the results of the present study, traditional aspects of

collectivism also appear in Korean adolescents and their parents and finally affect their personal characteristics, parenting styles, and behaviors. Also, this study supports the cultural ecology theory, which explains how individuals are influenced by their cultural values and social structure. Therefore, Korean adolescents and parents notice which cultural values are focused on Korean society, and they also maintain the important cultural values and social norms.

Generally, there are a number of studies that examine the individual aspects of coercion, delinquency, hostility, aggression, and violence within certain cultures (Tedeschi & Bond, 2001). In contrast, the study of the association between cultural values and adolescents' aggression is a lack of research works that have been empirically examined (Bond, 2004). Therefore, it could become meaningful to investigate these works of research in diverse ethnic and cultural backgrounds. The current study revealed how Korean families' Confucian cultural values are associated with Korean adolescents' aggressive behaviors. Although contemporary Korean society has changed and the prevalence of traditional values has decreased, these findings also indicate how Koreans understand and believe in Confucian cultural perspective.

Indirect Effect of Parenting Styles and Psychological Control between Adolescents' Personality Traits and Aggression

The third research question sought to examine the indirect effects of parenting styles and psychological control between adolescents' personality traits and overt, relational, and cyber aggression. The findings from the present study indicated that mothers' and fathers'

authoritarianism did play an important role as a mediator in the relationship between adolescents' personality traits and their aggression. More specifically, adolescents' agreeableness was negatively associated with overt aggression through their mothers' and through fathers' authoritarianism. Adolescents' agreeableness was negatively associated with relational aggression through their mothers' authoritarianism. Adolescents' agreeableness was negatively associated with cyber aggression through their mothers' and fathers' authoritarianism.

These findings are in line with previous studies (De Clercq et al., 2008; Manders et al., 2006; McNamara et al., 2010; Prinzie et al., 2004) on the mediating effect of little autonomy support and warm, negative dominance, harsh punishment, and highly controlling nature between children's and adolescents' personality traits and their aggressive behavioral problems. For instance, De Clercq et al. (2008) stated that adolescents with high levels of agreeableness showed lower levels of aggressive behavioral problems through parental control. Manders et al. (2006) also reported that highly agreeable adolescents showed less aggression through good relationships and the quality of parenting among mothers and fathers. According to Prinzie et al. (2004), the findings suggested that agreeable children and adolescents may obey and respect their parental values and behaviors, which may result in a positive, healthy nurturing environment.

The findings from the present study indicated that adolescents' extraversion was positively associated with overt aggression through their mothers' authoritarianism. In addition, adolescents' extraversion was also positively associated with cyber aggression

through their mothers' authoritarianism and their fathers' authoritarianism. Similarly, other studies found indirect effects of authoritarianism between adolescents' extraversion and aggression in the US (McNamara et al., 2010), the Netherlands (De Haan et al., 2010), and Japan (Hiramura et al., 2010). A study among American families indicated that aggressive children had higher extraversion through their mothers' highly restrictive control and little autonomy support (McNamara et al., 2010). De Haan et al. (2010) also reported that adolescents who were less extraverted showed aggression through parental overreactivity.

There were several findings regarding adolescents' neuroticism in this study; it was found that it is positively associated with overt aggression through fathers' authoritarianism and psychological control, positively associated with overt aggression through their mothers' psychological control, and positively associated with relational aggression through their mothers' authoritarianism. These findings are in agreement with previous studies that have also demonstrated that higher levels of adolescents' neuroticism are associated with their aggression because of more authoritarian parenting behaviors, low emotional support, punitiveness, negative parental discipline, and general unresponsiveness (Manders et al., 2006; Prinzie et al., 2004; Rubin et al., 2003). For instance, Prinzie et al. (2004) found that the associations between children's neuroticism and aggressive behavioral problems were mediated by parental negative discipline. Manders et al. (2006) also revealed that adolescents with high levels of neuroticism showed highly aggressive behavioral problems because of a negative parental and adolescent relationship among adolescents in The Netherlands.

Inconsistent with the previous studies that the relationships between children's negative emotionality (neuroticism) and aggressive behaviors were mediated by mothers' authoritative parenting styles (Paulussen-Hoogeboom et al., 2009), the findings of this study indicated that the link between adolescents' neuroticism and their aggression was not mediated by authoritative mothers. This finding suggests that mothers who set the expectations of mature and appropriate behavior from their adolescents did not indirectly affect the association between adolescents' neurotic personality and their aggressive acts.

The findings of the present study revealed that adolescents' openness to experience was negatively associated with overt aggression through their fathers' authoritarianism and psychological control. In addition, adolescents' openness to experience was negatively associated with cyber aggression through their fathers' authoritarianism. These findings are inconsistent with previous research that indicates no significant findings of parenting styles and psychological control as a mediator of the association between adolescents' openness to experience and aggression (Jensen-Campbell et al., 2003; Manders et al., 2006). Additionally, the significant findings of adolescents' openness to experience indicated the direct association between adolescents' personality traits and aggression and parental behaviors and aggression (Buschgens et al., 2010; Ehrler et al., 1999). For instance, Buschgens et al. (2010) stated that preadolescents with high levels of parental rejection and overprotection were more likely to engage in aggression.

The findings of the present study demonstrated that the father's authoritarianism and authoritarianism were not mediated by the relationships between adolescents' personality

traits and their relational aggression. In addition, with regard for both the relationship between adolescents' personality traits and relational aggression and the relationship between adolescents' personality traits and cyber aggression through their mothers' and fathers' psychological control, no significant results were produced. In other words, the father's parenting styles (authoritarianism and authoritativism) and psychological control did not play a mediator role in the association between adolescents' personality traits and their relational aggression. In conclusion, Korean adolescents may believe that their mothers' parenting is more important than the father's parenting in avoiding harmful relationships with other friends. Also, mothers may play an important role in whether adolescents engage in relational aggressive behaviors in Korean society.

These findings are inconsistent with past research, which illustrates that adolescents with low scores on agreeableness and conscientiousness showed aggressive behavioral problems through negative father's behaviors such as overactive discipline practices and coercive behaviors (Manders et al., 2006; Prinzie et al., 2003; Van Leeuwen, Mervielde, Braet, & Bosmans, 2004). For instance, Manders and others (2006) reported that conscientious adolescents showed lower levels of aggressive behavioral problems through a higher quality of relationships with fathers.

The findings of this investigation can be explained from the perspective of coercion theory. Coercion theory describes the development of aggressive and antisocial behaviors in children and adolescents. More specifically, this theory specifies that ineffectual parental responses to behavioral problems increase aggressive behaviors in children and adolescents.

Coercion theory also describes that adolescent aggressive behaviors are more likely to emerge when an adolescent is reinforced for responding to parental requests or demands with negative behaviors (Patterson, 1982). The findings support the role of coercion theory and indicate that parental authoritarianism (such as strict discipline, obedience to parents without question) toward their adolescents is associated with adolescent overt, relational, and cyber aggression. This is similar to previous findings that parents who are restrictive and punitive tend to raise children who engage in aggressive and antisocial behaviors (Grotzinger & Crick, 1996; Sheehan & Watson, 2008).

Indirect Effect of Parenting Styles and Psychological Control between Cultural Values and Aggression

The fourth research question examined the indirect effects of parenting styles and psychological control between Confucian values and overt, relational, and cyber aggression. The present study did not find support for a mediating role of parenting styles and psychological control in the association between adolescent and parental Confucian values and adolescents' aggressive behavioral problems. However, adolescents' and mothers' Confucian values were both directly related to overt, relational, and cyber aggression. Among adolescents' and fathers' Confucian values, only adolescents' Confucian values were directly related with overt, relational, and cyber aggression.

Contextual development models propose that parenting styles and behaviors are influenced by their culture, and thus parents encourage culturally desirable behaviors in their children (Chen & French, 2008; Super & Harkness, 2002). Parents in East Asian

countries have been described as showing highly controlling emotions and behaviors so that children comply with their parents' authority and discipline (Chen et al., 1997; Kim & Choi, 1994). Moreover, psychological control damages and hurts parents' relationships with their children (Shek, 2006), and thus parents in Eastern society are less likely to use negative parenting behaviors. Previous studies have supported these theoretical models to examine either the relationship between parenting styles and children's aggression (e.g., Chang et al., 2003; Nelson et al., 2006) or the relationship between adolescents' cultural values and their aggression (Bergeron & Schneider, 2005).

However, there was limited research examining parenting styles (psychological control) as a mediator between cultural values and children's and adolescents' aggression. Therefore, the present study emerged to investigate the research. Although the findings of this study indicated that adolescent and parental cultural values did not indirectly influence adolescents' aggression via the mediating role of parenting styles and parental psychological control in Korean families, it is unclear whether these findings can be generalized to other Korean families and other cultural contexts. This indicates that further study is needed to investigate how cultural values and social norms affect parenting styles (and psychological control) and how these factors influence adolescent aggression.

To summarize, the use of a carefully selected sample, measures, multiple informants, and structural equation modeling techniques enhanced the confidence in research findings. In addition, the use of bootstrapping techniques to test the significance of the indirect paths further advanced the confidence of the research findings.

Limitations and Future Research

Although the findings provide important insights into the relationships among adolescent personality traits, parenting styles, psychological control, and behavioral problems, several limitations should be considered in interpreting the above findings.

First, the sample of data collection for the present study should be considered in interpreting findings. The present study used a convenience sample of those located in Seoul, South Korea, and included adolescents who were only in middle school. The sample also represented high-income and well-educated families in this study. For example, Evans (2004) noted that adolescents who live in high SES family have more opportunities to access resources, information, and social support. Therefore, the choice of population limited the generalizability of the results. The findings of the current study should be replicated with samples from other geographic locations, socioeconomic statuses, and participant ages. For instance, data from the rural areas of South Korea and students in elementary or high schools in South Korea would provide different insights into the conditions. A nationally representative sample would be more accurate and provide greater generalizability across various groups of adolescents and families. Therefore, additional research should be conducted to test the generalizability of the current results.

The second limitation of the present study involves cross-cultural issues including measurements. The instruments (e.g., Big Five Inventory, Parenting Style) that are used in the research were developed in the United States. Researchers used measurements that were developed in other languages for different cultures carefully translated into their own

languages. Although the translated measurements were examined by other professionals, the meaning, accuracy, and cross-cultural validity of the constructs become important issues of concern. Thus, future research is needed in order to carefully choose the appropriate measurement for Korean families.

The third limitation of the present study is its cross-sectional design. The fundamental characteristic of cross-sectional design is the employment of a single point of data collection, thereby restricting one's ability to determine cause-and-effect relationships between variables. Moreover, cross-sectional data makes it unclear how developmental continuities and changes occur in conjunction with adolescent personality traits. For instance, surveying these adolescents during another period of time in the school year may have yielded different results. Therefore, longitudinal analyses could be utilized to examine the cause-effect relationships between adolescent personality characteristics, adolescents' aggression, and parenting styles (and parental psychological control) that have been suggested to impact this relationship. A longitudinal study would also provide information about the relationship between adolescent personality, adolescent aggression, and parenting styles (and parental psychological control) across time and different age groups.

The fourth limitation of this study is that gender difference was not conducted in the current study due to the limited sample size of girls. Previous studies have shown that relational aggression is more prevalent in girls, whereas overt aggression is more common in boys (Crick et al., 1996). However, the present study was not able to examine the gender differences because of a lack of a reasonable sample size for gender, although the total

sample of this study meets the sample size standard of 200 for SEM analysis. SEM is a large-sample technique that sees more than 200 as a reasonable sample size (Kline, 2005). SEM is based on covariances, which are less stable when estimated from small samples (Ullma, 2006). The sample of girls ($N= 148$) was much smaller than the sample of boys ($N= 213$) in the current study. This could have affected the model fit statistics and the overall model regarding gender. With a greater number of girls, it may be possible to examine the association between personality traits and aggression for both boys and girls through parenting styles (and psychological control).

There are several recommendations for future research. First, future research should improve the test of reliability and validity of personality traits and aggression. According to George and Mallery (2005), Cronbach's alphas were in the acceptable range ($> .70$). However, the present study showed low Cronbach's alphas with adolescent reports of overt (Cronbach's alpha = .59), relational (Cronbach's alpha = .61), and cyber aggression (Cronbach's alpha = .54), and with teacher reports of overt (Cronbach's alpha = .58), relational aggression (Cronbach's alpha = .69), adolescent agreeableness (Cronbach's alpha = .62), and neuroticism (Cronbach's alpha = .67). To improve reliability and validity for the present study, it is necessary that future studies clarify the test construct, reword some items after conducting a pilot study, and calculate the item-test correlations.

Second, peer reports of aggression should be included in future studies. Although the present study used a multi-informant strategy (self- and teacher-report), to increase the validity of adolescent aggressive behaviors, peer reports of aggression are needed because

self-reported aggression may give false information of such behaviors toward peers and might not reflect actual behaviors and attitudes. However, peers may also indicate different feelings when they are relationally threatened by others, and adolescents may share with peers social information that is not available to adults. Hence, future research may benefit from the use of peer reports when assessing aggressive behaviors.

Third, the construct of cyber aggression should be advanced by further research. The present study only used two items to measure cyber aggression, which may not evaluate adolescent cyber aggression fully or accurately in relation to know factors that contribute to the phenomenon of cyber behavior (e.g., prevalence, frequency, types, characteristics of aggression). Therefore, future research is necessary to improve the assessment of cyber aggression.

Fourth, the present study used only psychological control as parental behaviors. Further study is needed to include parental monitoring because a number of studies have found that low levels of parental monitoring are linked to increased aggression and delinquency (Barber, 1996; Finkenauer, Engels, & Baumeister, 2005). Parental monitoring is defined as parenting awareness and behaviors that involve information-seeking about the child's daily activities as well as direct supervision and communication with the child (Dishion & McMahon, 1998). Therefore, parental monitoring may provide more information in relation to adolescent overt, relational, and cyber aggression because parents can obtain information into how, where, and with whom adolescents spend their daily time, and can determine whether parents' rules and expectations are violated.

Implications

In spite of these limitations, the present study has several strengths and important implications to create new directions for intervention, prevention, and future research. The main contribution of the present study is that it provides a new and more thorough understanding of the personality domains and Confucian cultural values that are associated with overt, relational, and cyber aggression among Korean families. In addition, it identifies the mediating role of parenting styles and behaviors between adolescent personality domains, cultural values, and adolescent aggression. The conceptual model of the present study fits the data well statistically and identifies theoretically significant associations among the factors.

Another strength of this study is that it used multiple methods to assess these constructs, and included adolescent and parental reports of parenting styles (and psychological control), Confucian cultural values, and adolescent and teacher reports of aggressive behaviors. Previous research has used either adolescent reports or parent reports of parenting styles and behaviors (Garcia & Gracia, 2009; Pittman & Chase-Lansdale, 2001; Sandstrom, 2007), which may represent either the adolescent or parent perspective of parenting behaviors, thus, limiting results. In addition, using either a single method of self-report or teacher-report of aggressive behaviors (Prinz et al., 2004; DeYoung et al., 2008) may provide a biased perspective of aggressive behaviors.

The results of the present study suggest implications for parenting interventions. Both mothers and fathers might be involved in intervention programs to practice positive and

effective parenting styles and exhibit parenting behavior such as parental awareness and proactive involvement to reduce engagement in aggressive behavior among their children. They may also exercise parental warmth and support as well as appropriate discipline to avoid negative behavior among their children. In addition, the present study showed that adolescents' aggression was associated with parental psychological control, and parents' avoidance of the use of emotional and psychological control might help to reduce all forms of adolescents' aggression. Furthermore, parental education and involvement programs should include effective parenting skills, knowledge, and attitudes toward their children's destructive behavior.

Education professionals need to be aware of new evidences in research when planning intervention for aggressive children. When intervening with aggressive students it may be helpful to know adolescents' personality traits because people's personalities are complex, and it would be greatly insightful to learn how behavior is affected by positive and negative personality characteristics. For instance, positive personality traits such as high levels of agreeableness and low levels of neuroticism can decrease adolescents' aggressive behavioral problems. To better understand and support adolescents, teachers need training on awareness of aggressive behaviors, on how to intervene with aggressive students and victims, and how to understand and solve students' negative feeling and attitudes. Therefore, it is important for educators to be aware of adolescents' aggressive behavioral problems, to be proactive in preventing aggressive behavior, and to actively involve in the aggressive situation among their students. It is possible that children and adolescents assume that

aggressive behaviors are acceptable when teachers do not intervene in aggressive behaviors in school (Craig, Pepler, & Atlas, 2000).

Government must also actively engage in the prevention of aggression and violence among children and adolescents. The frequency of aggression and violence in schools has especially increased in Korea. Due to these incidents, several students have committed suicide in South Korea, and this has become a serious social issue in Korean society. Exposure to a large amount of violence from popular culture, competitive school programs that only focus on successful academic achievement, and public indifference to adolescent aggression and violence may be reasons Korean adolescents use aggressive behavior in school or other social settings.

Therefore, the Korean government announced its Final Comprehensive Measures to Stop School Violence in order to curb school violence and aggression (Ministry of Education, Science and Technology in South Korea, 2012). The policy emphasizes enhancing the role of principals and teachers in schools, improving the investigation system, expanding education of parents, and enhancing the roles of families and society. That means that Korean society has started to realize how serious aggression and violence are in Korean society and how these factors affect children and adolescents in Korea. Although the Korean government recognizes the serious problems of school aggression and violence, it must also continue the examination of school violence and develop better measurements to prevent children and adolescents from engaging in school aggression and violence.

The findings of the relationship between Confucian cultural values and adolescents'

aggression suggest that individuals' aggression may be related to cultural and social factors.

We believe that people's behavior is a result of both innate and environmental influences such as parents, teachers, and peers. Culture also has an impact on an individual's personality tendencies to be expressed in cultural values, social norms, and customs.

Although contemporary Korean society appears in individualistic aspects, Koreans still maintain collectivistic cultural values. The present study also indicates that adolescents and their parents highly emphasize Confucian values among their cultural values, and their Confucian cultural attitudes affect their overt, relational, and cyber aggression. Therefore, it is important to realize how cultural values and beliefs may determine the extent to which personality tendencies are expressed as well as inhibit or encourage individuals' expression of certain behavior. In addition, cultural context influences parenting styles and behaviors shaped by cultural values and norms, and these parental beliefs and attitudes also affect their children's behavioral adjustment (Chen & French, 2008; Super & Harkness, 2002). In terms of intervention, parents and teachers need to be aware that culture is another significant factor in the formation of personal characteristics and behavior among students and must better understand the changes and individual desires and attitudes within contemporary Korean society.

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Appendix A

School Letterhead

March 26th -30th, 2012

Office of Research Integrity and Protections
Syracuse University
121 Bowne Hall
Syracuse, NY 13244

Letters of Cooperation:

I am Yo Ok Chang, a graduate student in the Department of Child and Family Studies at Syracuse University in the United States. I have requested permission to collect research data from students of 7th - 8th graders and their parents through a project entitled adolescent personality, Confucian values, parenting typologies, and adolescent behavioral outcomes in South Korea. I have been informed of the purposes of the study and the nature of the research procedures. I have also been given an opportunity to ask questions of the researcher.

The risk associated with participation in this study is minimal. The participants can feel uncomfortable due to the nature of some of the questions asked but I will not require the participants to answer questions regarding anything that is beyond my research contexts. Involvement in the study is voluntary so the participants may choose to participate or not. There is no direct benefit to adolescents and their parents, but we hope the information will contribute to general knowledge about understanding of adolescent behavioral aggressions. If adolescents and their parents decide they want to be part of this study, adolescents will be asked to answer questions about personality characteristics, Confucian values, parenting styles (and psychological control), and behavioral aggressions and parents will be asked to answer questions about Confucian values, their parenting styles (and psychological control), and demographics. Teachers of the participating adolescents will be asked to answer questions about the adolescents' behavioral aggressions. It will take approximately 15-20 minutes for each parent, 30-35 minutes for each student, and 30 minutes for each teacher.

All information will be kept anonymous; this means that the students' and their parents' name will not appear anywhere and no one will know about their feeling or specific behavior. If you have any questions, you may contact me at 315-263-3846 or contact the Syracuse University's Institutional Review Board at Phone: (315) 443-3013, E-mail: orip@syr.edu.

Thank you very much for your cooperation with this study.

YOUR STATEMENT OF PERMISSION:

As a representative of _____, I am authorized to grant permission to have the researcher recruit research participants from our school. Yo Ok Chang is also permitted to collect research data during school hours. The researcher has agreed to the following restrictions: no contact during school hours.

Your Name and Signature

Date

Enclosure: A description of the study

Appendix B

A Description of the Study

Adolescent Personality, Confucian Values, Parenting Typologies, and Adolescent behavioral outcomes in South Korea

Rationale

This study proposes to examine the associations among adolescent personality traits, Confucian values, parenting styles, and outcomes of aggressive behavior in South Korean families. This study investigates 1) the effect of adolescent personality traits and their overt, relational, and cyber aggression, 2) the effect of Confucian values and their overt, relational, cyber aggression, and 3) indirect model of parenting styles (and psychological control) among adolescent personality, Confucian values, and overt, relational, and cyber aggression. Research findings on this study can help an understanding of adolescent behavioral development based on parental and cultural impact.

Methods

Adolescents and their parents will be asked to fill out separate questionnaires. The set of questionnaires for adolescents include: Big five inventory (John & Srivastava, 1999), Chinese Value Survey (Matthews, 2000), parenting styles (Robinson, Mandeleco, Olsen, & Hart, 2001), psychological control (Barber, 1996), and overt and relational aggression (Crick & Grotpeter, 1995) and cyber aggression (Sontag, Clemans, Graber, & Lyndon, 2011). Parents will be asked to fill out the Chinese Value Survey, Robinson et al. (2001) Parenting Styles and Dimensions Questionnaire (PSDQ: Robinson et al., 2001), psychological control (Barber, 1996), and demographic questionnaire. Teachers will be asked to fill out the behavioral aggressions.

Confidentiality

All information will be kept anonymous; this means that your name will not appear anywhere and your specific answers will not be linked to your name in any way. Also, I will assign a number to your responses, and only researcher will have the key to indicate which number belongs to which participant.

Benefit

There are no immediate benefits to the participants. However, data from the study may help researcher to better understand the relationship among adolescents' cultural beliefs and their behaviors, and parental attitudes and behaviors.

Appendix C

Consent Form 1 - Parental Consent

Research Title: Adolescent Personality, Confucian Values, Parenting Typologies, and Adolescent behavioral outcomes in South Korea

My name is Yo Ok Chang, and I am a graduate student in the Department of Child and Family Studies at Syracuse University in the United States. I am asking you to allow permission for your child to participate in this study. This study will examine the associations among adolescent personality traits, Confucian values, parenting styles, and outcomes of aggressive behavior in South Korean families. For this study, the child will be the seventh-and eighth-graders attending middle schools in Seoul, Korea. Your child will be asked to answer questions about his/her personality characteristics, Confucian values, parenting styles (and psychological control) and his/her overt, relational, and cyber aggressive behavior. All of this should take about 30-35 minutes. If your child feels uncomfortable answering the questions, he/she can stop to answer the question. For your child, there are no physical risks involved in this project. However, some of the questions may be perceived as emotionally sensitive. Your child will be assured that he/she can discontinue at anytime and/or skip items that they deem too sensitive. I am available to answer any questions you or your adolescents may have. There are no immediate benefits to you. We believe that the survey will be a benefit by assisting us in understanding Korean adolescent personality characteristics, Confucian values, parenting styles, and how these factors are related to adolescent behavioral aggressions. Involvement in the study is voluntary so your child may choose to participate or not.

I am also inviting you to participate in a research study. Involvement in the study is voluntary so you may choose to participate or not. This sheet will explain the study to you and please feel free to ask questions about the research if you have any. I will be happy to explain anything in detail if you wish. I am interested in learning more about what types of Confucian values (e.g., duty, loyalty, filial piety, respect for the elderly, and sincerity) and parenting styles you are engaging in and how these Confucian values and parenting styles affect your children's development. You will be asked to answer questions about your Confucian values, parenting styles (and psychological control) and demographics. This will take approximately 15-20 minutes of your time. All information will be kept anonymous; this means that your name will not appear anywhere and your specific answers will not be linked to your name in any way. Also, I will assign a number to your responses, and only I will have the key to indicate which number belongs to which participant.

There are no physical risks involved in this project. However, some of the questions may be perceived as emotionally sensitive. You will be assured that you can discontinue at anytime and/or skip items that they deem too sensitive. I am available to answer any questions you may have. There are no immediate benefits to you. Data may be used to further understand the parent-adolescent interface. Information on the links between adolescent personality traits, Confucian values and aggressive outcomes through parenting styles in Korean adolescents can assist in designing and implementing adolescent programs.

I will be glad to explain all the paper survey procedure if you have any question. If you no longer wish to continue, you have the right to withdraw from the study, without penalty, at any time. If you have any questions, concerns, or complaints about the research, contact the Ambika Krishnakumar, Ph.D. at 315- 443-4293 and Yo Ok Chang at 315-263-3846.

If you have any questions about your rights as a research participant, you have questions, concerns, or complaints that you wish to address to someone other than the investigator, if you cannot reach the investigator, contact the Syracuse University Institutional Review Board at 315-443-3013.

All of my questions have been answered, I am 18 years of age or older, and I wish to participate in this research study. I have received a copy of this consent form.

Signature of participant

Date

Printed name of participant

Your Child Name

Thank you very much for participation in this research study.

Sincerely,

Signature

Date

Investigator:

Yo Ok Chang

426 Ostrom Ave.

Dept. of Child and Family Studies

Syracuse University

Phone: 315-263-3846

E-mail: yochang@syr.edu

Signature

Date

Faculty Advisor:

Dr. Ambika Krishnakumar

426 Ostrom Ave.

Dept. of Child and Family Studies

Syracuse University

Phone: 315-443-4293

E-mail: akrishna@syr.edu

Appendix D

Consent Form 2 - Teacher's Consent

Research Title: Adolescent Personality, Confucian Values, Parenting Typologies, and Adolescent behavioral outcomes in South Korea

Dear Teachers,

My name is Yo Ok Chang, and I am a graduate student in the Department of Child and Family Studies at Syracuse University in the United States. I am inviting you to participate in a research study. Involvement in the study is voluntary so you may choose to participate or not. This sheet will explain the study to you and please feel free to ask questions about the research if you have any. I will be happy to explain anything in detail if you wish.

I am interested in finding out how each student interacts with other students how he or she shows behavioral aggressions in your classroom. You will be asked to answer questions about overt, relational, and cyber aggression of the participating adolescents in your classroom. This will take approximately 15-20 minutes of your time. All information will be kept anonymous; this means that your name will not appear anywhere and your specific answers will not be linked to your name in any way. Also, I will assign a number to your responses, and only I will have the key to indicate which number belongs to which participant.

There are no physical risks involved in this project. However, some of the questions may be perceived as emotionally sensitive. You will be assured that you can discontinue at anytime and/or skip items that they deem too sensitive. I am available to answer any questions you may have. There are no immediate benefits to you. Data may be used to further understand the teacher-adolescent interface. Information on the links between adolescent personality traits, Confucian values and aggressive outcomes through parenting styles in Korean adolescents can assist in designing and implementing adolescent programs at school.

I will be glad to explain all the paper survey procedure if you have any question. If you no longer wish to continue, you have the right to withdraw from the study, without penalty, at any time. If you have any questions, concerns, or complaints about the research, contact the Ambika Krishnakumar, Ph.D. at 315- 443-4293 and Yo Ok Chang at 315-263-3846.

If you have any questions about your rights as a research participant, you have questions, concerns, or complaints that you wish to address to someone other than the investigator, if you cannot reach the investigator, contact the Syracuse University Institutional Review Board at 315-443-3013.

All of my questions have been answered, I am 18 years of age or older, and I wish to participate in this research study. I have received a copy of this consent form.

Signature of participant

Date

Printed name of participant

Thank you very much for participation in this research study.

Sincerely,

Signature

Date

Signature

Date

Investigator:
Yo Ok Chang
426 Ostrom Ave.
Dept. of Child and Family Studies
Syracuse University
Phone: 315-263-3846
E-mail: yochang@syr.edu

Faculty Advisor:
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Appendix E

Assent Form 1- Child Assent

Informed Assent Form for Adolescent Personality, Confucian Values, Parenting Typologies, and Adolescent behavioral outcomes in South Korea

My name is Yo Ok Chang, and I am a graduate student in the Department of Child and Family Studies at Syracuse University in the United States. I am asking you to participate in this research study because you are selected to be a representative among Korean adolescents 13 to 15 years of age who are attending the middle school in Seoul, South Korea.

If you decide you want to be part of this study, you will be asked to answer questions about your personality characteristics, Confucian values (e.g., duty, loyalty, filial piety, respect for the elderly, and sincerity), parenting styles (and psychological control) and overt, relational, and cyber aggressive behavior. All of this should take about 30-35 minutes. There are some things about this study you should know. You may feel uncomfortable answering the questions which are related to hurt your feelings. Not everyone who takes part in this study will benefit. A benefit means that something good happens to you. We believe the survey will be a benefit by assisting us in understanding adolescent personality characteristics, Confucian values, parenting styles, and how these factors are related to adolescent behavioral aggressions.

When I am finished with this study I will write a report about what was learned. This report will not include your name or that you were in the study.

Involvement in the study is voluntary so you may choose to participate or not. I have already asked your parents if it is ok for me to ask you to take part in this study. Even though your parents said I could ask you, you still get to decide if you want to be in this research study. You can also talk with your parents, grandparents, and teachers before deciding whether or not to take part. No one will be mad at you or upset if you decide not to do this study. If you decide to stop after we begin, that's okay too.

You can ask questions now or whenever you wish. If you want to, you may call me at 315-263-3846, or you may call Dr. Ambika Krishnakumar, 315- 443-4293. If you are not happy about this study and would like to speak to someone other than me, you or your parents may call the Syracuse University Institutional Review Board (IRB) at 315-443-3013.

Please sign your name below, if you agree to be part of my study. You will get a copy of this form to keep for yourself.

Your signature: _____

Today's date: _____

Print your name: _____

Thank you in advance for returning this letter.

Sincerely,

Yo Ok Chang, Graduate Student
Dept. of Child and Family Studies
Syracuse University

Ambika Krishnakumar, Ph.D.
Dept. of Child and Family Studies
Syracuse University

Appendix F

Demographics

Thank you for agreeing to share with us your family experiences and your thoughts and feelings about your family. Please remember that there is no right or wrong way to answer these questions. Following are questions about you and your family. Please check (✓) where appropriate.

1. What is your child's gender in this study? a. ____ Male b. ____ Female
2. How old is your child in this study?
a. ____ 13-year-old b. ____ 14-year-old c. ____ 15-year-old
3. What is your marital status?
a. ____ Married
b. ____ Separated
c. ____ Divorced
d. ____ Widowed
e. ____ Single, never married
f. ____ Remarried following separated by death or divorce
4. Father's educational level:
a. ____ Not completed high school
b. ____ Completed high school
c. ____ Completed some college education
d. ____ Completed 4-year college
e. ____ Complete graduate school (M.S./Ph.D.)

f. ____ other (please specify)

5. Mother's educational level:

a. ____ Not completed high school

b. ____ Completed high school

c. ____ Completed some college education

d. ____ Completed 4-year college

e. ____ Complete graduate school (M.S./Ph.D.)

f. ____ other (please specify)

6. Father's occupation:

_____ Service

_____ Skilled work

_____ Clerical work

_____ Professional

_____ Public official

_____ Own business

_____ Unlisted

7. Mother's occupation:

_____ Service

_____ Skilled work

_____ Clerical work

_____ Professional

_____ Public official

_____ Own business

_____ Unlisted

8. How many hours do you (father) work outside the house every week? _____

9. How many hours do you (mother) work outside the house every week? _____

10. What is the family's total monthly income (before taxes)?

- a. _____ Less than 1,500,000 won
- b. _____ 1,500,000 - less than 2,000,000 won
- c. _____ 2,000,000 won - less than 2,500,000 won
- d. _____ 2,500,000 won - less than 3,000,000 won
- e. _____ 3,000,000 won - less than 3,500,000 won
- f. _____ 3,500,000 won - less than 4,000,000 won
- g. _____ 4,000, 000 won - less than 4,500,000 won
- h. _____ More than 4,500,000 won

11. What is the religious preference of your family?

- _____ Buddhist
- _____ Catholic
- _____ Christian
- _____ Other (please specify)
- _____ None

12. What is your zip code? _____

Appendix G

The Big Five Inventory (BFI): Child Form

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please circle a number next to each statement to indicate the extent to which you agree or disagree with that statement. "I see myself as someone who..."

		Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	Is talkative	1	2	3	4	5
2	Tends to find fault with others	1	2	3	4	5
3	Does a thorough job	1	2	3	4	5
4	Is depressed, blue	1	2	3	4	5
5	Is original, comes up With new ideas	1	2	3	4	5
6	Is reserved	1	2	3	4	5
7	Is helpful and unselfish with others	1	2	3	4	5
8	Can be somewhat careless	1	2	3	4	5
9	Is relaxed, handles stress well	1	2	3	4	5
10	Is curious about many different things	1	2	3	4	5
11	Is full of energy	1	2	3	4	5
12	Starts quarrels with others	1	2	3	4	5
13	Is a reliable worker	1	2	3	4	5
14	Can be tense	1	2	3	4	5
15	Is ingenious, a deep thinker	1	2	3	4	5
16	Generates a lot of enthusiasm	1	2	3	4	5
17	Has a forgiving nature	1	2	3	4	5
18	Tends to be disorganized	1	2	3	4	5
19	Worries a lot	1	2	3	4	5

		Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
20	Has an active imagination	1	2	3	4	5
21	Tends to be quiet	1	2	3	4	5
22	Is generally trusting	1	2	3	4	5
23	Tends to be lazy	1	2	3	4	5
24	Is emotionally stable, not easily upset	1	2	3	4	5
25	Is inventive	1	2	3	4	5
26	Has an assertive personality	1	2	3	4	5
27	Can be cold and aloof	1	2	3	4	5
28	Perseveres until the task is finished	1	2	3	4	5
29	Can be moody	1	2	3	4	5
30	Values artistic, aesthetic experiences	1	2	3	4	5
31	Is sometimes shy, inhibited	1	2	3	4	5
32	Is considerate and kind to almost everyone	1	2	3	4	5
33	Does things efficiently	1	2	3	4	5
34	Remains calm in tense situations	1	2	3	4	5
35	Prefers work that is routine	1	2	3	4	5
36	Is outgoing, sociable	1	2	3	4	5
37	Is sometimes rude to others	1	2	3	4	5
38	Makes plans and follows through with them	1	2	3	4	5
39	Gets nervous easily	1	2	3	4	5
40	Likes to reflect, play with ideas	1	2	3	4	5
41	Has few artistic interests	1	2	3	4	5
42	Likes to cooperate with others	1	2	3	4	5
43	Is easily distracted	1	2	3	4	5
44	Is sophisticated in art, music, or literature	1	2	3	4	5

Appendix H

The Chinese Value Survey (CVS): Parent Form and Child Form

The aim of this study is to find out what matters are important or unimportant to people. Please indicate how important to you each of the 40 items is.

To express your opinions, imagine an Importance Scale that varies from 1 to a maximum of 9. (1) indicates “of no importance to me at all”, and (9) indicates “of supreme importance to me.” In other words, the larger the number, the greater will be the degree of importance to you. Give one number (either 1, 2, 3, 4, 5, 6, 7, 8 or 9) to each item below, provided to express the importance of that item to you personally. You can concentrate better by asking yourself the following question when you rate an item: “How important is this item to me personally?” Repeat the same question when you rate the next item, and so on.

	From 1 to 9		From 1 to 9
1. Filial piety		17. Non-competitiveness	
2. Industry – working hard		18. Personal steadiness and stability	
3. Tolerance – of others		19. Resistance to corruption	
4. Harmony – with others		20. Patriotism	
5. Humbleness		21. Sincerity	
6. Loyalty to superiors		22. Keeping oneself disinterested and pure	
7. Observation of rites and rituals		23. Thrift	
8. Reciprocation of greetings and favors, gifts		24. Persistence (perseverance)	
9. Kindness (Forgiveness, compassion)		25. Patience	
10. Knowledge (Education)		26. Repayment of good or evil of others	
11. Solidarity with others		27. Sense of cultural superiority	
12. Moderation, following the middle way		28. Adaptability	
13. Self-cultivation		29. Prudence (carefulness)	
14. Ordering relationships by status and observing this order		30. Trustworthiness	
15. Sense of righteousness		31. Having a sense of shame	
16. Benevolent authority		32. Courtesy	

	From 1 to 9		From 1 to 9
33. Contentedness with one's position in life		37. Chastity in women	
34. Being conservative		38. Having few desires	
35. Protecting your 'face'		39. Respect for tradition	
36. A close, intimate friend		40. Wealth	

Appendix I

The Parent Styles and Dimensions Questionnaire (PSDQ): Child Form

This questionnaire is designed to measure how often your parents exhibit certain behaviors toward you. Please read each item on the questionnaire and think about *how often* your parents' exhibit this behavior and place your answer on the line to the left of the item.

Example:

Father	Mother	
<u>3</u>	<u>2</u>	1. My parents allow me to choose what to wear to school.

I EXHIBIT THIS BEHAVIOR:

- 1 = Never
- 2 = Once in Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

Father	Mother	
_____	_____	1. My father/mother is responsive to my feelings and needs.
_____	_____	2. My father/mother uses physical punishment as a way of discipling me.
_____	_____	3. My father/mother takes my desires into account before asking me to do something.
_____	_____	4. When I ask my father/mother why I have to conform, He/she states: because I said so, or I am your parent and I want you to.
_____	_____	5. My father/mother explains to me how he/she feels about my good and bad behavior.
_____	_____	6. My father/mother spank when I am disobedient.
_____	_____	7. My father/mother encourages me to talk about my troubles.

Father	Mother	
_____	_____	8. My father/mother finds it difficult to discipline me.
_____	_____	9. My father/mother encourages me to freely express (himself/herself) even when disagreeing with him/her.
_____	_____	10. My father/mother punishes by taking privileges away from me with little if any explanations.
_____	_____	11. My father/mother emphasizes the reasons for rules.
_____	_____	12. My father/mother gives comfort and understanding when I am upset.
_____	_____	13. My father/mother yells or shouts when I misbehave.
_____	_____	14. My father/mother gives praise when I am good.
_____	_____	15. My father/mother gives into me when I cause a commotion about something.
_____	_____	16. My father/mother explodes in anger towards me.
_____	_____	17. My father/mother threatens me with punishment more often than actually giving it.
_____	_____	18. My father/mother takes into account my preferences in making plans for the family.
_____	_____	19. My father/mother grabs me when being disobedient.
_____	_____	20. My father/mother states punishments to me and does not actually do them.
_____	_____	21. My father/mother shows respect for my opinions by encouraging me to express them.
_____	_____	22. My father/mother allows me to give input into family rules.
_____	_____	23. My father/mother scolds and criticizes to make me improve.

Father	Mother	
_____	_____	24. My father/mother spoils me.
_____	_____	25. My father/mother gives me reasons why rules should be obeyed.
_____	_____	26. My father/mother uses threats as punishment with little or no justification.
_____	_____	27. My father/mother has warm and intimate times together with me.
_____	_____	28. My father/mother punishes by putting me off somewhere alone with little if any explanations.
_____	_____	29. My father/mother helps me to understand the impact of behavior by encouraging me to talk about the consequences of my own actions.
_____	_____	30. My father/mother scolds or criticizes when my behavior doesn't meet his/her expectations.
_____	_____	31. My father/mother explains the consequences of my behavior.
_____	_____	32. My father/mother slaps me when I misbehave.

Appendix J

The Parent Styles and Dimensions Questionnaire (PSDQ): Parent Form

This questionnaire is designed to measure how often you exhibit certain behaviors toward your child. Please read each item on the questionnaire and think about *how often* you exhibit this behavior and place your answer on the line to the left of the item.

Example:

Father	Mother	
<u>3</u>	<u>2</u>	1. I allow my child to choose what to wear to school.

I EXHIBIT THIS BEHAVIOR:

- 1 = Never
- 2 = Once in Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

Father	Mother	
_____	_____	1. I am responsive to my child's feelings and needs.
_____	_____	2. I use physical punishment as a way of disciplining my child.
_____	_____	3. I take my child's desires into account before asking him/her to do something.
_____	_____	4. When my child asks why he/she has to conform, I state: because I said so, or I am your parent and I want you to.
_____	_____	5. I explain to my child how I feel about the child's good and bad behavior.
_____	_____	6. I spank when my child is disobedient.
_____	_____	7. I encourage my child to talk about his/her troubles.
_____	_____	8. I find it difficult to discipline my child.

Father	Mother	
_____	_____	9. I encourage my child to freely express (himself/herself) even when disagreeing with me.
_____	_____	10. I punish by taking privileges away from my child with little if any explanations.
_____	_____	11. I emphasize the reasons for rules.
_____	_____	12. I give comfort and understanding when my child is upset.
_____	_____	13. I yell or shout when my child misbehaves.
_____	_____	14. I give praise when my child is good.
_____	_____	15. I give into my child when the child causes a commotion about something.
_____	_____	16. I explode in anger towards my child.
_____	_____	17. I threaten my child with punishment more often than actually giving it.
_____	_____	18. I take into account my child's preferences in making plans for the family.
_____	_____	19. I grab my child when being disobedient.
_____	_____	20. I state punishments to my child and do not actually do them.
_____	_____	21. I show respect for my child's opinions by encouraging my child to express them.
_____	_____	22. I allow my child to give input into family rules.
_____	_____	23. I scold and criticize to make my child improve.
_____	_____	24. I spoil my child.
_____	_____	25. I give my child reasons why rules should be obeyed.

Father	Mother	
_____	_____	26. I use threats as punishment with little or no justification.
_____	_____	27. I have warm and intimate times together with my child.
_____	_____	28. I punish by putting my child off somewhere alone with little if any explanations.
_____	_____	29. I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.
_____	_____	30. I scold or criticize when my child's behavior doesn't meet my expectations.
_____	_____	31. I explain the consequences of the child's behavior.
_____	_____	32. I slap my child when the child misbehaves.

Appendix K

Psychological Control Scale: Child Form

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes your mother and father and mark your response in the blank provided.

- 1 = Never like him/her
 2 = Once in Awhile like him/her
 3 = About Half of the Time like him/her
 4 = Very Often like him/her
 5 = Always like him/her

My father (mother) is a person who . . .

Father	Mother	
_____	_____	1. is always trying to change how I feel or think about things.
_____	_____	2. changes the subject, whenever I have something to say.
_____	_____	3. often interrupts me.
_____	_____	4. blames me for other family members' problems.
_____	_____	5. brings up my past mistakes when he/she criticizes me.
_____	_____	6. is less friendly with me if I do not see things his/her way.
_____	_____	7. will avoid looking at me when I have disappointed him/her
_____	_____	8. If I have hurt his (her) feelings, stops talking to me until I please him/her again.
_____	_____	9. monitors my internet use.

Appendix L

Psychological Control Scale: Parent Form

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes yourself and mark your response in the blank provided.

- 1 = Never like him/her
 2 = Once in Awhile like him/her
 3 = About Half of the Time like him/her
 4 = Very Often like him/her
 5 = Always like him/her

I (father/ mother) am a person who . . .

Father Mother

- | | | |
|-------|-------|--|
| _____ | _____ | 1. is always trying to change how my child feels or thinks about things. |
| _____ | _____ | 2. changes the subject, whenever I have something to say. |
| _____ | _____ | 3. often interrupts my child. |
| _____ | _____ | 4. blames my child for other family members' problems. |
| _____ | _____ | 5. brings up my child's past mistakes when I criticizes my child. |
| _____ | _____ | 6. is less friendly with my child if he/she does not see things my way. |
| _____ | _____ | 7. will avoid looking at my child when he/she has disappointed me. |
| _____ | _____ | 8. If my child hurts my feelings, stops talking to him/her until he/she please me again. |
| _____ | _____ | 9. monitors my child's internet use. |

Appendix M

Children's Aggression Scale: Child Form

Reflect on your behavior when you are angry. Please read each statement and circle the **2** if the item is **very true** of you. Circle the **1** if the item is **somewhat true** of you. If the item is **not true** of you, circle the **0**.

When I am angry with others, I.....

		Not true	Some what true	Very true
1	Try to make others not like a certain person by spreading rumors about them or talking behind their back	0	1	2
2	Hit, kick, or punch others	0	1	2
3	Get even by keeping a person from being in my group of friends	0	1	2
4	Say mean things to others to insult them or put them down	0	1	2
5	Ignore others or stops talking to them	0	1	2
6	Call others mean names	0	1	2
7	Tell them I will stop liking them unless they do what I say	0	1	2
8	Push and shove others	0	1	2
9	Try to keep certain people from being in my group when it is time to do an activity or play time	0	1	2
10	Tell others that I will beat them up unless they do what I want	0	1	2
11	Directly teased someone in a mean way through email, instant messenger, text messaging or website	0	1	2
12	Say mean things about someone on a website, email, instant messenger, or text messaging so that people would not like him/her	0	1	2

Appendix N

Children's Aggression Scale: Teacher Form

Read each question carefully and reflect on your thought about your each student. Please circle the 2 if the item is very true of you think. Circle the 1 if the item is somewhat true of you think. If the item is not true of you think, circle the 0.

Student's ID Number _____

		Not true	Some what true	Very true
1	This child tries to make others not like a certain person by spreading rumors about the person or talking behind the person's back.	0	1	2
2	This child hits, kick, or punch others at school.	0	1	2
3	This child gets even by keeping a person from being in his/her group of friends.	0	1	2
4	This child says mean things to others to insult them or put them down.	0	1	2
5	This child ignores others or stops talking to them.	0	1	2
6	This child calls others mean names.	0	1	2
7	This child tells others I will stop liking them unless they do what I say.	0	1	2
8	This child pushes and shoves friends.	0	1	2
9	This child tries to keep certain people from being in his/her group when it is time to do an activity or play time.	0	1	2
10	This child tells others that he/she will beat them up unless they do what he/she wants.	0	1	2

Appendix O

Results of Factor Analysis

Table 1. Pattern Matrix Factor Loadings for Adolescent Personality Traits

	Loading
Factor 1: Conscientiousness	
33. Does things efficiently	.71
38. Makes plans and follows through with them	.71
28. Perseveres until the task is finished	.65
3. Does a thorough job	.64
8. Can be somewhat careless (Double loading factor 1 & 3)	-.35/.49
13. Is a reliable worker (Double loading factor 1 & 5)	.34/.37
18. Tends to be disorganized (Double loading factor 1 & 2)	.46/-.40
23. Tends to be lazy (Double loading factor 1 & 2)	.40/-.33
43. Is easily distracted (Double loading factor 1 & 2)	-.31/.50
Factor 2: Neuroticism	
19. Worries a lot	.73
39. Gets nervous easily	.66
14. Can be tense	.66
29. Can be moody	.53
4. Is depressed, blue (Double loading factor 2 & 5)	.45/-.42
24. Is emotionally stable, not easily upset (Double loading factor 1 & 2)	.44/-.31
Factor 3: Extraversion	
21. Tends to be quiet	.78
1. Is talkative	.76
11. Is full of energy	.69
36. Is outgoing, sociable	.67
26. Has an assertive personality	.65
6. Is reserved (Double loading factor 2 & 3)	.56/-.43
16. Generates a lot of enthusiasm (Double loading factor 1 & 3)	.35/-.45

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

Table 1 continued. Pattern Matrix Factor Loadings for Adolescent Personality Traits

	Loading
Factor 4: Openness to experience	
30. Values artistic, aesthetic experiences	-.80
44. Is sophisticated in art, music, or literature expected	-.78
41. Has few artistic interests	-.74
25. Is inventive	-.54
15. Is ingenious, a deep thinker	-.53
20. Has an active imagination	-.50
5. Is original, comes up with new ideas	-.36
10. Is curious about many different things (Double loading factor 3 & 4)	-.42/ -.33
35. Prefers work that is routine (Double loading factor 1 & 4)	.34/ .31
Factor 5: Agreeableness	
32. Is considerate and kind to almost everyone	.58
2. Tends to find fault with others	.57
22. Is generally trusting	.55
27. Can be cold and aloof	.54
17. Has a forgiving nature	.49
7. Is helpful and unselfish with others	.43
12. Starts quarrels with others (Double loading factor 3 & 5)	.34/ .36
37. Is sometimes rude to others (Double loading factor 2 & 5)	-.33/ .41
Weak loading	
9. Is relaxed, handles stress well (Weak loading)	
31. Is sometimes shy, inhibited	
34. Remains calm in tense situations	
40. Likes to reflect, play with ideas	
42. Likes to cooperate with others	

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

Table 2. Pattern Matrix Factor Loadings for Confucian Cultural Values

	Loading		
	Adolescents	Fathers	Mothers
Factor 1: Integrity & Tolerance			
2. Industry – working hard	.78	.70	.62
21. Sincerity	.77	.71	.69
30. Trustworthiness	.77	.68	.70
3. Tolerance – of others	.76	.61	.71
4. Harmony – with others	.72	.67	.68
5. Humbleness	.66	.70	.64
25. Patience	.65	.62	.66
28. Adaptability	.64	.67	.65
32. Courtesy	.60	.67	.56
9. Kindness (Forgiveness, compassion)	.55	.63	.63
13. Self-cultivation	.52	.64	.61
18. Personal steadiness and stability	.50	.63	.62
10. Knowledge (Education)	.45	.51	.51
Factor 2: Confucian Ethos			
34. Being conservative	.80	.77	.84
38. Having few desires	.65	.63	.63
17. Non-competitiveness	.61	.54	.48
35. Protecting your ‘face’	.59	.74	.79
39. Respect for tradition	.50	.59	.54

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

Table 3. Pattern Matrix Factor Loadings for Adolescents' Reports of Parenting Styles

	Loading	
	F	M
Factor 1: Authoritativism		
21. My father/mother shows respect for my opinions by encouraging me to express them.	.76	.76
29. My father/mother helps me to understand the impact of behavior by encouraging me to talk about the consequences of my own actions.	.76	.74
22. My father/mother allows me to give input into family rules.	.71	.68
31. My father/mother explains the consequences of my behavior.	.71	.68
25. My father/mother gives me reasons why rules should be obeyed.	.69	.74
9. My father/mother encourages me to freely express (himself/ herself) even when disagreeing with him/her.	.69	.66
5. My father/mother explains to me how he/she feels about my good and bad behavior.	.67	.66
18. My father/mother takes into account my preferences in making plans for the family.	.67	.63
12. My father/mother gives comfort and understanding when I am upset.	.66	.68
27. My father/mother has warm and intimate times together with me.	.66	.69
14. My father/mother gives praise when I am good.	.64	.61
7. My father/mother encourages me to talk about my troubles.	.65	.67
3. My father/mother takes my desires into account before asking me to do something.	.57	.59
11. My father/mother emphasizes the reasons for rules.	.54	.54
1. My father/mother is responsive to my feelings and needs.	.52	.53
Factor 2: Authoritarianism		
26. My father/mother uses threats as punishment with little or no justification.	.79	.80
32. My father/mother slaps me when I misbehave.	.78	.76
6. My father/mother spank when I am disobedient.	.76	.73
16. My father/mother explodes in anger towards me.	.68	.65
19. My father/mother grabs me when being disobedient.	.67	.67
2. My father/mother uses physical punishment as a way of disciplining me.	.65	.68
28. My father/mother punishes by putting me off somewhere alone with little if any explanations.	.63	.54
10. My father/mother punishes by taking privileges away from me with little if any explanations.	.62	.62
30. My father/mother scolds and criticizes when my behavior does not meet his/her expectations.	.60	.65
13. My father/mother yells or shouts when I misbehave.	.53	.61
4. When I ask my father/mother why I have to conform, He/she states: because I said so, or I am your parent and I want you to.	.50	.46
23. My father/mother scolds and criticizes to make me improve.	.35	.45

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

F= Fathers, M= Mothers.

Table 4. Pattern Matrix Factor Loadings for Parents' Reports of Parenting Styles

	Loading	
	F	M
Factor 1: Authoritativism		
29. I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.	.79	.66
25. I give my child reasons why rules should be obeyed.	.76	.75
31. I explain the consequences of the child's behavior.	.75	.67
21. I show respect for my child's opinions by encouraging my child to express them.	.73	.72
22. I allow my child to give input into family rules.	.70	.60
5. I explain to my child how I feel about the child's good and bad behavior.	.68	.65
12. I give comfort and understanding when my child is upset.	.67	.58
7. I encourage my child to talk about his/her troubles.	.66	.69
9. I encourage my child to freely express (himself/herself) even when disagreeing with me.	.64	.65
14. I give praise when my child is good.	.59	.63
27. I have warm and intimate times together with my child.	.58	.67
18. I take into account my child's preferences in making plans for the family.	.57	.60
3. I take my child's desires into account before asking him/her to do something.	.53	.52
11. I emphasize the reasons for rules.	.53	.40
1. I am responsive to my child's feelings and needs.	.45	.39
Factor 2: Authoritarianism		
32. I slap my child when the child misbehaves.	.66	.71
6. I spank when my child is disobedient.	.65	.67
13. I yell or shout when my child misbehaves.	.65	.63
19. I grab my child when being disobedient.	.63	.65
2. I use physical punishment as a way of disciplining my child.	.63	.67
10. I punish by taking privileges away from my child with little if any explanations.	.63	.59
16. I explode in anger towards my child.	.61	.63
26. I use threats as punishment with little or no justification.	.60	.59
30. I scold or criticize when my child's behavior doesn't meet my expectations.	.57	.55
4. When my child asks why he/she has to conform, I state: because I said so, or I am your parent and I want you to.	.54	.54
28. I punish by putting my child off somewhere alone with little if any explanations.	.49	.34
23. I scold and criticize to make my child improve.	.47	.52

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

F = Fathers, M = Mothers.

Table 5. Pattern Matrix Factor Loadings for Adolescents' Reports of Parental Psychological Control

	Loading	
	F	M
Factor 1		
4. My father (mother) is a person who blames me for other family members' problems.	.81	.76
5. My father (mother) is a person who brings up my past mistakes when he/she criticizes me.	.80	.76
3. My father (mother) is a person who often interrupts me.	.79	.76
8. My father (mother) is a person who If I have hurt his/her feelings, stops talking to me until I pleases him/her again.	.75	.69
7. My father (mother) is a person who will avoid looking at me when I have disappointed him/her.	.73	.70
6. My father (mother) is a person who is less friendly with me if I do not see things his/her way.	.70	.70
1. My father (mother) is a person who is always trying to change how I feel or think about things.	.64	.66
9. My father (mother) is a person who monitors my internet use.	.61	.59
2. My father (mother) is a person who changes the subject, whenever I have something to say.	.53	.60

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

F = Fathers, M = Mothers.

Table 6. Component Factor Loadings for Parents' Reports of Psychological Control

	Loading	
	F	M
Factor 1		
7. I am a person who will avoid looking at my child when he/she has disappointed me.	.69	.69
3. I am a person who often interrupts my child.	.69	.62
4. I am a person who blames my child for other family members' problems.	.67	.67
5. I am a person who brings up my child's past mistakes when I criticize my child.	.65	.64
8. I am a person who If my child hurts my feelings, stops talking to him/her until he/she please me again.	.63	.58
1. I am a person who is always trying to change how my child feels or thinks about things.	.62	.61
6. I am a person who is less friendly with my child if he/she does not see things my way.	.59	.70
2. I am a person who changes the subject, whenever I have something to say.	.58	.57
9. I am a person who monitors my child's internet use.	.40	.31

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

F = Fathers, M = Mothers.

Table 7. Pattern Matrix Factor Loadings for Adolescents' and Teachers' Reports of Aggression

	Loading	
	Adolescents	Teachers
Factor 1: Relational aggression		
9. Try to keep certain people from being in my group when it is time to do an activity or play time	.81	.87
3. Get even by keeping a person from being in my group of friends	.77	.85
5. Ignore others or stops talking to them		
7. Tell others I will stop liking them unless they do what I say	.57 .57	.54 .73
Factor 2: Overt aggression		
2. Hit, kick, or punch others		
8. Push and shove others	.82	.87
10. Tell others that I will beat them up unless they do what I want	.72 .66	.85 .41

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

Table 8. Pattern Matrix Factor Loadings for Adolescents' Reports of Cyber Aggression

	Loading
	Adolescents
Factor 1: Cyber aggression	
11. Directly teased someone in a mean way through email, instant messenger, text messaging or website	.83
12. Say mean things about someone on a website, email, instant messenger, or text messaging so that people would not like him/her	.83

Note: Only factor loadings that equaled or exceeded .30 in absolute value are given.

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